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DR. MORTON
PIONEER IN THE USE OF ETHER



Dr. William Thomas Green Morton

DR. MORTON

Pioneer in the Use of Ether

By RACHEL BAKER

Illustrated by
LAWRENCE DRESSER

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TO MY PARENTS . . .

BOOKS BY
RACHEL BAKER

THE FIRST WOMAN DOCTOR
The Story of Elizabeth Blackwell, M.D.

DR. MORTON
Pioneer in the Use of Ether

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“I had great motive to destroy or alleviate pain.”

CHAPTER ONE

THE DOOR OPENED IMPETUOUSLY AND THE BOY CAME running out to the doctor's cart.

"Please, Doctor Pierce, let me go, too!"

He was a lad of eleven, dressed in a long blue coat with big brass buttons, and in his hand he carried the doctor's brown saddlebag filled with surgical instruments.

"I could drive for you, Doctor Pierce," he offered. "It's a long way, and you may be very tired coming back."

He handed up the shabby bag to the tall, gray-cloaked physician, who looked down at him and smiled, shaking his head.

"No, Will, I can't take you. Not this time. Not on this call!"

The cart stood in front of the doctor's house. He was just about to leave on a visit to a country patient, and all morning the boy, who was a boarder in his home, had been begging to go with him.

The lad came from a neighboring village. He was staying with the doctor and his wife while going to school. Often he rode with the doctor on his country visits.

"Please, Doctor Pierce," he persisted.

The physician shook his head. "I've told you the reason," he explained.

"But I'm going to be a doctor myself," the boy burst out. "So how could I possibly be afraid?"

The doctor's face, tense and drawn under the tall beaver hat, seemed to relax, and then grew serious again. He looked down at the boy and sighed.

"Get into the cart," he said.

He was lean, with dark hair and brooding lips. From the way he drew his forehead together, the boy could see that he was worried.

"It will not be an easy visit," he said, as he leaned down to stow away his bag of surgical instruments.

Then he handed the reins to the boy.

They drove silently along the open Common of the town, past the white houses with their green shutters darkened by the early morning rain, along the stone fences, and out into the open, hilly Berkshire countryside.

They began to climb a lonely country road that led between open fields. It was a raw, spring morning, and the doctor in his great coat seemed to shiver, but the boy was too excited to feel the cold.

"It may be a long wait," said the doctor, "and I cannot take you inside."

The boy looked disappointed, but he did not speak. They were turning in at last at a shabby farmhouse.

A dog jumped up barking, and a woman opened the door and came out to the cart. Her red eyes were anxious, and she twisted her hands under her apron when she saw the physician.

"My husband is worse," she moaned. "His leg looks dreadful."

The doctor got down. He put his hand on the farm woman's shoulder. "I cannot save your husband's leg," he said. "But we may save your husband's life if you will allow me to operate."

He reached for the saddlebag. The woman did not answer but, pressing her lips together, she inclined her head.

Her husband had injured himself on a rusty scythe. The wound had festered.

As the doctor began to explain to her gently what would have to be done, two men came out of the house. They were farmers dressed in rough homespun jeans and muddy boots. They approached the physician diffidently.

He glanced at them and spoke to the woman.

"Are these your relatives who will help me?"

She nodded. "My cousins." Then she clasped her hands.

"But how will he be able to bear the pain?"

"It will not take long," said the doctor. "I will work fast."

The boy sat watching as the farmer's wife, followed by the doctor, went into the house. The two men lingered awkwardly at the doorway. Then the woman came out and motioned to them, and they, too, went in.

The boy sat alone in the cart and waited, but after a while he got cold and went into the yard and stood against the side of the house which was shielded from the wind.

As he passed the kitchen window he saw that a sheet had been spread over the big kitchen table, and near by on a chair stood a pitcher and a bowl with the doctor's instruments.

Then he heard sounds in the house and he knew that the sick man was being brought downstairs into the kitchen. There were voices, but he could not hear what they were saying.

Under his coat he felt himself sweating. He leaned against the clapboards of the house. For a long time it was still, very still, on the other side of the wall, as though no one were stirring.

Then he heard the sick man scream!

He put his hands to his ears and he held his breath, digging his nails into his palms, and pressing into the side of the house as if for shelter.

The cry was not human.

It came again and again, rising high and terrible, until it seemed he had not the strength to endure it. And still it did not stop.

He ran to the cart and, for a long time, he waited. There was no sound now. Then the door opened and Doctor Pierce came out. He was carrying the saddlebag.

When he approached closer, the boy saw that he looked very tired.

"Is it over?" he asked.

The physician nodded and, sagging down in the cart, he put his hands to his face.

"If only there were some way to stop pain!" he said.



For a long time it was still, very still.

The boy trembled.

Yet that night in his weekly letter to his father, he wrote firmly, "I know now what I am going to be."

Since the time of his earliest childhood games he had had only one wish—to be a physician.

As a little boy, growing up in the old-fashioned farmhouse, where he was born August 9, 1819, near the Massachusetts village of Charlton, he had rolled bread pills, splinted the cat, and bandaged the family dog.

Once, in his zeal to cure, he poured such a large dose of cough medicine down the baby's throat that the little girl started to choke.

"William Thomas Green Morton," his mother cried, "do you realize that you almost killed your baby sister?"

"I meant to cure her!" was his earnest reply.

William's father, who came in just then, overheard this remark. He called the boy to him. They sat down together on the high-backed settle by the kitchen fireplace.

"If you want to be a doctor, Will," he said, "you will have to learn how."

"Don't put such notions in the child's head," interrupted Mrs. Morton. "He'll do well enough if he turns out a good farmer."

Her husband got up.

"I don't want him to spend his life pulling stones and building fences!"

James Morton, late a Quaker from the Society of Friends in Smithfield, was determined that his son should be educated.

"He shall do better than I did."

Bitterly he criticized the country school, a shack set in the hills, where the children froze in the winter and could not endure the heat of summer when the sun beat down on the unshingled flat roof.

"Why, the farmers would build a better shelter for their cattle!" he said.

The ignorant farm girl who kept school could hardly read and write herself, so how could she teach the children? As for the traveling master who came for a few weeks each year, his whole interest was in the free meals he would get, not in his pupils.

"I went to such a school," said James Morton. "My son must do better." And he insisted that the farm must be sold so that the family could move into town.

"I can't do it!" Mrs. Morton came of a family of farmers. Her father, she exclaimed, built the first frame house in the community. Her grandfather was a signer of the township charter.

"But those were the old days," cried her husband. "This is 1827 . . . a new century!"

In the town of Charlton, there was a little Academy, and, he pointed out, their son would soon be old enough to attend.

Mrs. Morton sighed. Her husband was a restless farmer. He had abandoned the quaint, religious ways of the Quakers. He read books that she could not understand.

What he wanted for the boy was dim to her, but finally she gave way to her husband's urgings. The farm,

which had come to her on her marriage, was sold at last. The family moved into town.

Mr. Morton became the owner of the village store at the crossroads. William, now eight years old, was sent to the Charlton Academy.

"But I thought that was what you wanted!" Mrs. Morton cried, when her husband began to criticize this school, too.

The teaching was outmoded, he said, and the sleepy master with his dreary hornbooks did not know what he was doing.

He managed to get himself elected to the board of trustees of the Academy. He harangued the other members. At his own expense he took the coach to Providence, interviewed the President of Brown University, and brought back a new teacher—a young man, a recent graduate.

"We can't continue in the old ways!"

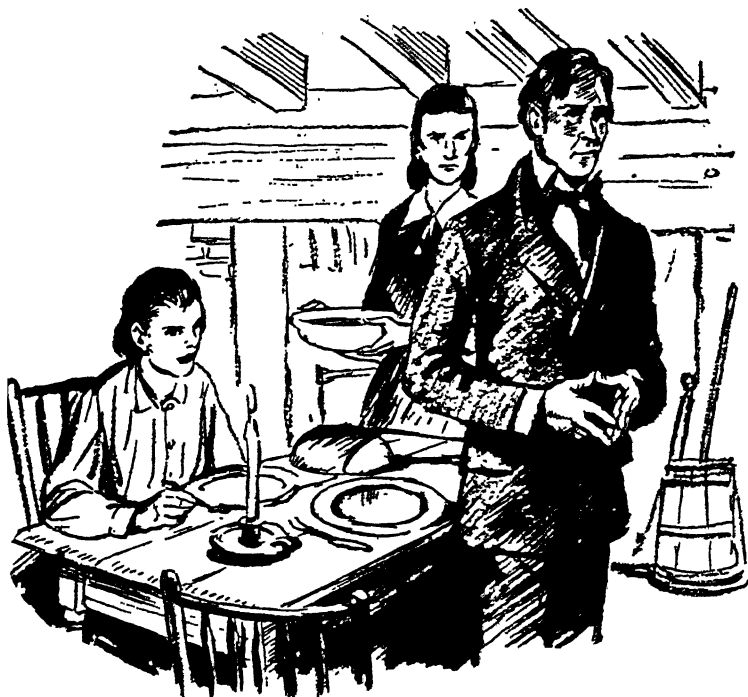
But the people of the town did not agree. They did not like the new methods. They forced the young teacher to resign.

Indignantly, James Morton resigned as a trustee. He withdrew his son from the school.

"What will you do now?" asked his wife. She could not forget that she had been obliged to leave the farm. And during the controversy with the people of the town, Mr. Morton's store had been neglected. Few wagons stopped. The business was not prosperous.

"All the same," said James Morton, "we must send the boy to a better school."

And so it came about, when the lad was twelve, that he was sent off to the neighboring town of Oxford, to be



"We must send the boy to a better school."

enrolled as a day student at the Oxford Academy, a much larger, a much better-known school.

It was arranged that William was to live in the home of Doctor Pierce, a country physician, who was his father's friend.

"My son," Mr. Morton had written, "hopes also to become a physician."

The doctor greeted the boy. "A terrible profession," he said. "I advise no one to follow it."

But William soon felt at home in the doctor's household, where the door knocker was forever sounding and no call from a sick patient was ever refused.

He read the doctor's books avidly. He read of cuppings and bleedings, of purges and fevers, and harrowing operations. And, riding out with Doctor Pierce on his long country calls, he asked endless questions.

He rolled bandages for the doctor. He watched him sew up a wound.

"There is no other work," he insisted, "that I would ever care to follow."

At school he neglected his studies. Greek and Latin grammar did not interest him.

When the year's work was over at last, and he came home, it was with hesitation that he showed his father the report from the Academy.

Mr. Morton held up the paper in the dim light of the store, "We will send you to another school," he said.

During the summer, William occasionally worked in the store with his father, or sometimes, with his body propped on one sack, his book on another, he read through long sleepy afternoons.

He loved the smell of bolted cloth, molasses, fish, coffee, and snuff which pervaded the dim interior, and the sound of the molasses keg dripping rhythmically.

Few wagons came to town. There were no customers. Mr. Morton gloomily consulted his shabby ledgers. "The

country has overbuilt," he said. "Too many canals, too many waterways. And now the farmers can't sell their produce."

"I don't want you to be a storekeeper," he said to William.

The boy went wandering with a paper of sticky lozenges in his pocket, or an apple his father had given him.

In the town, which lay between hills, there were fascinating places to explore. There was the tall hill, Mashy Mugget, with its crown of mowings, which he loved to climb on a windy day. From the crest you could see all the Berkshires, a sea of hills, swimming in blue mist. And the world seemed large, wonderful, mysterious.

On a clear day you could count the church spires of nineteen villages from "Big Mugget." You could see to Thompson, Connecticut, to Rhode Island, and those more solid clouds, hanging on the horizon, were not clouds at all, but the mist-wrapped slopes of the mountains of New Hampshire.

Here on summer afternoons, looking out from the tall, blanched grass, the boy lay dreaming, and a sense of power, of wonderful elation, came over him.

What would he be? How was the world to remember him?

He looked down at the town. He could make out the white square of the Town Meeting House, the Congregational and Universalist churches with their prim spires, and the shadowed space of the old Burying Ground.

The town which had once seemed so busy, so interesting

to him when he was first brought into its bustle from the farm, now looked cramped and small, compared to that larger vista of many towns, many church spires, many villages, which you could see on a clear day from Mashy Mugget.

In the autumn he went off to school again, this time to Northfield, a famous Academy, far from home, located in the hills near the border of the state.

During his first few days he was homesick. The journey by coach had taken six hours. And then he found a new teacher and subject which fascinated him.

The name of the new course was "natural philosophy." It consisted of lectures on chemistry, physics, botany, and geology. And it was given in very few schools.

"You'll get no credit," a fellow-student warned.

The course was given late in the afternoon, when all the other work was finished. It carried no credit, and it was not required.

"What of that?" cried William. He could not get enough of the lectures. And, sitting in the front row with his notebook on his knees, he followed every word of the teacher with wrapt attention.

Doctor Wellington, a young man from Harvard, was the lecturer. Some of the students thought him strange.

He was shabby and eloquent. When he spoke his whole body got knotted. His gestures were unmanageable, but his voice was electric, and what he said was more stirring to William than any poetry he had ever heard.

"The day will come," he cried, "when we will forget the dead authors and we will study the living world around us!"

His clothes were wrinkled, and his fingers were stained with the chemicals of experiment.

"There are many kinds of explorers and discoverers," he declared. "A man can be a Columbus and he doesn't need a ship!"

He spoke of the great chemists and of the great physicians, of Harvey, of Jenner; of the mystery of the body, and the mysteries of the rocks and the stars.

He turned a piece of stone which he held in his hands. "The mystery of the earth is here," he said, "the whole story if we but had eyes to see it."

He set the young men to collecting mineral specimens. William roamed the hillsides near the school. He made a collection of different kinds of rocks which was exhibited.

He wrote home, "I cannot tell you, Father, how much I am learning."

Doctor Wellington took the boy with him on long walks through the woods. He pointed out birds that the lad, with untrained eyes, had never seen. He described their plumage, their habits, their typical songs.

"This is a science—ornithology."

William took it up enthusiastically. He passed through a bewildering period when he wanted to study, wanted to know everything.

He climbed trees, wrote descriptions of birds and their habits, collected stones from the rocky ledges, and spent

many hours in Doctor Wellington's little improvised laboratory.

Never had the plodding months of the school term run by so quickly. It was spring. He went to say good-by to his teacher.

"Perhaps the next time we meet," said Doctor Wellington, "I may be the one who will be learning."

He confided that he had always had a great interest in medicine. And he spoke of the men who were merely mechanics and of those who faced with daring and courage the terrible mysteries of the body's diseases and pain.

Riding home in the coach, William was wrapped in dreams. Something great to do, something that the world would remember!

He came back to find his father very discouraged. "The farmers ask only for credit," Mr. Morton said. "If conditions go on in this way, the country will yet face a panic."

The goods lay fading on the shelves, and the ledgers were full of unpaid accounts.

In the autumn, William could not go back to Northfield. He finished his last year of school at the Leicester Academy, near by, rooming with a private family, and subsisting on the frugal baskets which his mother sent from home.

But he was determined to go to medical college. He sent to every school in the country for catalogues. And his father continued to say, "It will somehow be done."

Then there came the day when William was graduated. He came home. He faced his father in the store full of unsold goods.

How tired his father looked! His cheeks had fallen. His eyes were rimmed.

"I don't want to start now," said William. "I will work for a year or two."

Mr. Morton did not answer.

Two weeks later, William left with his father for Boston. Mr. Morton had written to a friend, Mr. James B. Dow, publisher of a small religious journal and owner of a little bookstore.

He had promised William a job as a clerk in the store.

William was seventeen years old. He had never been away from home, except at school. It was arranged that his father should go with him to get him settled.

They took the all-night coach to Boston. On the way, Mr. Morton became ill with a toothache. They got off at Stafford Springs to have the tooth drawn.

Luckily, at the tavern there happened to be a dentist who was visiting. He was tall, with dark hair and dark sidelocks. He was very friendly.

His name was Dr. Horace Wells. He had just finished a period of apprentice-training in Boston, and he was on his way to Hartford, where he thought he would locate.

He took out Mr. Morton's tooth expertly. Afterward he talked with William.

"If you ever want to study dentistry," he offered, "come to me."

William thanked him. "It is my hope to become a physician," he said.

He resumed his journey with his father. They arrived in Boston in the afternoon. A room was soon found for William.

When Mr. Morton left, William looked around at the shabby room with its slanted roof and lumpy bed under a patched counterpane.

On the shelf, above his table, he had laid out the medical catalogues. The next day he went to work.

He worked in a little store located on a steep lane running down toward the big Boston Common. All day he wrapped packages, waited on customers, sold religious tracts, Abolitionist papers, or the latest romances for which the young ladies asked blushinglly.

The city with its hilly streets, and dark shuttered houses, made him feel indescribably lonely and lost.

He did not make friends.

At night he walked alone in the Common, or sometimes, crossing Cambridge Street with its carriages, he dipped down toward the river, wandering along the high board fence that closed away the towers of the Massachusetts General Hospital from the street.

The big gray building, with its high dome and cold stone columns, stood on the edge of the Charles River, and the indigent sick, coming from Cambridge and Charleston and from towns down the river, were brought to the hospital in barges.

Looking through the gate, William could see how the porters came out to lift the litters which were usually attended by a resident physician or a medical student.

The buildings of the Harvard Medical School stood near by. William envied the young men as they came hurrying from a late lecture in the classroom to the hospital.

He went home to his room to turn the pages of the frayed catalogues that he had brought with him. The Harvard Medical School, he knew, was one of the finest in the country. The greatest physicians, Warren, Bigelow, Hayward, taught there.

He learned their names and all about them. He followed every item of medical interest in the newspapers. Dr. John Collins Warren, senior surgeon at the Massachusetts General Hospital and lecturer at Harvard, had a son, Dr. Jonathan Warren, also a physician.

One morning, William read in the newspapers that the young Doctor Warren was coming back to Boston. After postgraduate studies in Paris with Professor Alexandre Pierre Louis, in London with Sir James Paget, he was returning home to join his father in practice, at Number Two Park Place.

William thought bitterly. "I am twenty. I have not started yet."

After three years in Boston, he did not have enough money saved to carry him through more than one term at the cheapest medical school.

Coming home from the bookstore one night, he crossed the Common on the "long path" and, mounting to Park Place, stood before Doctor Warren's windows.

Often when he passed here, a light showed. It lay in a yellow, friendly glow along the street. And when the curtains were not drawn, he could see the famous doctor studying.

How eagerly he had asked questions about this noted physician.

Dr. John Collins Warren, he was told, was one of the founders of the Massachusetts General Hospital, one of the country's greatest institutions for the indigent sick. He lectured at Harvard. He held public clinics. He saw fifty to sixty patients a day.

"Wherever there's good done," said the people of Boston, "there's a Warren behind it!"

This great physician, it was recounted, was descended from General Warren, from a long line of famous doctors; he numbered among his friends Napoleon III, the emperor of France, and the poorest scrubwoman in Boston, whose children he had delivered.

The stories of his skill and his great charity and humility of heart were countless.

William, looking in at the lighted windows where the curtains had not been drawn, wondered unhappily if the time would ever come when he would walk the wards with such a physician.

He thought of the students fortunate enough to be in his classes. He thought of Doctor Warren's son coming home to practice, and he felt that he couldn't remain a clerk any longer, that somehow, some way, he must study.

From home his father had once written that perhaps a small legacy might come to William. A relative had passed away, leaving a farm. "If the debts against the estate are not too great, perhaps there may be something left over."

Impetuously, William decided that he would begin. With what he had saved he could get through one term,

perhaps part of another, at the Washington Medical College in Baltimore.

The legacy would have to come. It would provide for the rest!

He left Mr. Dow. He gave up the bleak room where he had spent so many lonely evenings. He went to Baltimore, traveling all night by coach. And he enrolled as a medical student.

Ardently he threw himself into the work. He ran from lecture to lecture. Anatomy, chemistry, pharmacy—the mystery of these subjects was at last revealed to him.

He kept voluminous notebooks. He memorized every formula, and at the end of the term his name stood among those who had done the best work.

His professors encouraged him, and again his dreams were boundless.

Then one day came the letter, the letter that he had expected from his father. He held it in his hands and the paper trembled. The estate had been settled, his father wrote sadly. The legacy was worthless!

William took down his medical books from the shelf. Bitterly he threw his clothes into the portmanteau.

“What has happened?” It was a young man from the room beside his.

“I can’t go on!” He clenched his hands, turning away so that the student should not see him.

“But don’t act in such haste.”

He whirled around. “What can I do without money? What I have would not last me more than three months!”

“Three months!” said his friend. “Good enough. In that length of time you can become a dentist.” And he began to tell with excitement of a new school that had opened in the city.

“It’s a college of dentistry, the first of its kind in the country.”

He explained that it was no longer necessary to waste years as an apprentice. True, the course in the new school was two years, but the professors had very few students. “They will be glad to let you in, even for a short time.”

William listened. He was bewildered. What should he do, go back to Mr. Dow’s store?

The young man pointed out that even with three months of training, he could start practicing.

“And then when you’re making money you can always study in the evening with some older dentist.”

Suddenly it came into William’s head that Dr. Horace Wells, whom he once had met, was now located in Hartford where, his father had written him, he was doing very well.

Perhaps Doctor Wells would help him.

He enrolled at the Baltimore College of Dental Surgery. “And after that,” he wrote to his father, “I will resume my medical studies.”

He saw nothing presumptuous in such long-range plans.

CHAPTER TWO

IN THE TOWN OF FARMINGTON, THE POST ROAD FROM Hartford makes a deep turn. On the slope of this turn, overlooking the traffic that passes—the mail stage, dignified carriages, an occasional phaeton—stands the old Elm Tree Inn, remote, sedate, spacious. An ample white building with cool green shutters, shaded by elm trees, built in 1638, it looks down on the stir of the town with aloofness.

Assemblies are sometimes held in the dining hall, a room with dark rafters, where voices are never raised, where even the tinkle of glass is subdued.

At one of the evening parties, carefully chaperoned by mothers and aunts, the young ladies of Farmington, in pale-colored lawn and muslin, were allowed to dance with the young men of the town.

One of these girls was Elizabeth Whitman, daughter of one of the oldest and finest families of the town, student at Miss Sarah Porter's new school for young ladies.

Small, delicate, with a pale, calm face, dark eyes, glowing hair, she was dressed in white lawn trimmed with cherry ribbons.

Her dance card was filled. She sat near her mother. The young men came and went. In their long-tailed coats with big brass buttons, pale yellow trousers, fitted gloves, wide

satin stocks—the effect about the shoulders was always big—with their hair combed up in a tuft in front after the Byronic fashion, they all looked alike.

Most of them were students at Yale, members of distinguished families of Connecticut—the Treadwells, the Porters, the Cowles. Every mother with a daughter there knew the family history of every young man present, could trace it back for at least four generations.

“I would like to keep one dance open,” said Elizabeth Whitman to her mother, and she put her handkerchief over her program.

There was a stir in the crowd of young men always hovering about Elizabeth. A newcomer was presented.

“Dr. William Thomas Green Morton.” He had a poetic fall of dark hair; very fine, very sensitive features.

“Doctor Morton,” murmured Mrs. Whitman. She held out her hand.

The young man bowed.

“Delighted,” said Mrs. Whitman. She was small, fine, like her daughter, but something about her had hardened. “I suppose you are one of the town’s new physicians?”

The young man came up from the bow as if for air. His gaze was on the girl. “Physician,” he said, “regretfully, no, not yet, madam . . . only a dentist.”

“Oh!” Mrs. Whitman’s smile was less cordial. Dentists had no standing. It was a calling of personal servitude, not much better in a way than being a barber.

“Then you are practicing here?”

“Yes, and studying in the evenings with Dr. Horace



"Could I have the honor of a dance?"

Wells of Hartford. I was recently in attendance at the Baltimore College of Dental Surgery."

There was a slight note of defense in his voice. "I . . . may I . . . could I have the honor of a dance with your daughter?"

He bowed again deeply. The music, a flute, a viola, and two violins, had started.

Mamma was about to interpose that her daughter's dance card was filled, but the young lady was already up, and the little dance program, attached to her wrist by a ribbon, swayed.

When another young man, her promised partner for this dance, came hurrying across the length of waxed floor an instant later to claim her, he saw her moving off with the stranger in a whirl of white lawn.

"Who is he?" someone remarked.

"Only a dentist," was the answer behind them.

There was a stir of talk along the walls where the elder women sat, as the newcomer passed in the first turn with Miss Whitman.

"Well, he looks distinguished."

"Distinguished or not, Mrs. Whitman has better plans for her daughter!" The voice was sharp and gossipy.

When the young girl returned from the dance, her partner bowed and withdrew. He had asked for another dance. There was not another one open on her program.

She leaned back on the straight-backed polished chair beside her mother. She was flushed after the dance. She fanned herself with her handkerchief.

"I don't think I care for another dance with anyone." She looked after the young man as he left her. And he, turning in the crowd, smiled.

"I hope you didn't ask him to call?" Her mother glanced at her. Elizabeth was still fanning herself, now somewhat nervously under her mother's look.

"I . . . what? Well, it was only polite!" The girl's tone was careless, almost too light. Her mother looked at her.

The next evening, Doctor Morton came to call on the Whitmans. Lifting the door knocker of the big white house looking out on the meadows, he was both annoyed and excited.

All day he had been unable to keep his mind either on his patients or on the books of dental practice that he studied in the intervals between their coming.

"Only a visit of courtesy, simple good manners," he had promised himself as, with a feeling of heightened elation, he stood waiting for the door to open. "Pure politeness, that's all." He held his beaver, well brushed, in his hand.

He was twenty-three, very ambitious, with a long plan ahead of him for every hour, every day of his life. . . . It lay before him like a blueprint, like a well marked-out road.

To be so interrupted: cherry ribbons and lawn, dark eyes, a glowing face with laughter held back! In Boston, during the years when he had worked in Mr. Dow's store, he had been too lonely, and he had lived too obscurely to make friends. The girls with whom his fellow-clerks associated had not interested him.

In Baltimore, during that precious half term at the medi-

cal school, and then during the three meager months at the dental college, his life had been one big eager gulp of learning. It was like a meal that one had to swallow down under threat of the plate being taken away. His money was running out and he had to cram in somehow all he could manage. Quickly, greedily, he had to learn at once without leisure, fill himself while he could.

He had so far to go yet, so little to go with. He had to get started as a dentist, then save money, move to some larger city. Turning a drill in his fingers, plugging teeth, was not his ambition.

"I intend really," he said in Mrs. Whitman's immaculate waxed parlor, "I intend actually to become a physician."

But even as he spoke, he realized how empty, how almost boastful this statement must sound, and he flushed, painfully aware of the silence that had followed. Most young men at his age were already established in practice. He had not yet begun to study.

During the summer he found himself coming back frequently to call on the Whitmans. Mrs. Whitman had said once, rather pointedly, that Elizabeth was too young to receive steady callers.

The remark had been directed to him, and, getting its inference, he flushed, determined not to return again. But afterward he reassured himself. Actually, he was interested in the whole family. There was Elizabeth, of course, who always came eagerly, took his cloak, asked about his work and his studies. But, then, he was almost as fond of her younger brother Francis, a very delicate boy, who said he

would like to study medicine, or, yes, even dentistry.

And there were two little girls, Margaret and Ellen May, dark-eyed like Elizabeth, sewing on samplers usually, under their mother's direction. The embroidered texts, "God Bless Our Home," "Sufficient Unto the Day Is the Evil Thereof," decorated the whole house.

"We will make one for Doctor Morton," they said. The quiet, grave young dentist, who liked children, was popular with them.

"What will you put down?" Their brother Francis had a gently mischievous look.

"Where is Elizabeth?" they answered in chorus.

Their mother frowned. "Children should be seen and not heard," she said.

That evening, Mr. Whitman was in the parlor when Doctor Morton came to call.

He was a tall man, clean-shaven, with gray hair that fell almost to his shoulders.

"We have the highest respect, my wife and I, for the profession of dentistry," he said. "It's a work that's needed and that has to be done." He paused, pressed his fingers together judiciously, unclasped them. "But it's a profession," he went on, "which, in my considered opinion, has no brilliant prospects."

William would have interrupted him, but he held up his hand. "I don't mean money only." Again he made the judicious gesture with his hands, pressing his fingers together. "I mean reputation . . . family standing . . . accomplishment."

The young dentist bowed his head, did not speak. Suddenly his plans seemed vague and fragmentary. He hesitated to repeat them. At any given moment a man must be judged for what he was at that moment. How far had he gone?

He didn't return to the Whitmans.

A few days later he met Elizabeth accidentally, or had he been standing just a little longer than was necessary near the side entrance of the little brown brick store on the corner of Main Street, near the brook? In the rooms above, formerly used as offices, Miss Sarah Porter's new school for young ladies was located.

The girls began coming down at four o'clock. He stood across the way until he saw Elizabeth, in cloak and hood, coming out of the doorway.

He took her books. "I was just passing," he said.

It seemed to him that she caught her breath. Then she offered almost wistfully, "We haven't seen you for several days."

He was silent. Together they turned down the side path to the brook, where a little bridge crossed to the Farmington meadows.

He began to talk quietly of what her father had said. The thoughts that had been racing in his head poured out. "He's entirely right, of course . . . but I don't mean to remain a dentist . . . I don't mean to remain in Farmington either!"

Elizabeth sat down on a stone. "I used to think," she said, "that I would never want to go away from this town.

It seemed to me that no other place in the whole world could be so beautiful."

He stood silent, holding her cloak, his foot on the stone where she sat, and he looked past her at the rising slope of the town behind them.

The town lay in a valley, between two low slopes of mountains. The big, brooding hills closed in protectingly. The town was lovely, with its old, quiet white houses, each one more correct, more dignified than the other. Above the green arches of the elm trees, white and slender, rose the church spire, pointing to the sky.

"My grandfather built that church," said Elizabeth, slightly turning. "He preached there for forty-five years. My family has lived here for four generations.

"I suppose," she went on, "that I'll marry here. The Whitmans are half of this town . . ." She broke off.

He listened in silence. She stopped speaking, too. They looked across the meadows. It was September now, four months since they had danced together, that brief turn at the ball.

The grass was bleached after the long summer, pale as though its vitality had been drawn. But near the river it darkened, still rich and green there, because the water, overflowing the shallow banks, continually renewed it.

This was the best farming land of Farmington. All of the older, well-established families owned lots here, as well as further up in the hills toward New Britain.

"My father has land here for me," she went on. Between them and the river lay a cut in the land, water flowed

through it, the Farmington Canal. Occasionally towboats passed, drawn slowly by teams of gray horses on the banks.

They could hear the cries of the drivers. Great prosperity had been expected from the building of the canal. But now the craze was for the new railroads, a much swifter form of transportation. Farmington, with its canal, might have been left sleepily behind, but the businessmen of the



"My parents would expect me to choose a well-educated man."

town, Elizabeth's father among them, had not invested too heavily. This was a venture for outsiders, and theirs were the losses.

"I suppose," said Elizabeth, looking out on the canal where the towboat had just passed, had gone on to the wonder of the locks, lifting the canal on stone piers over the river, "I can imagine," she went on, and her hands lay quietly in her lap, "that my parents would expect me to choose a well-educated man." She smiled half to herself at the picture she was drawing. He listened gloomily. This

was certainly no portrait of himself. Educated? He had not half begun!

"But he would have to be practical, too; someone who could farm, or else go into business . . . maybe a works of some kind . . . perhaps in New Britain or Unionville."

There were manufacturing shops springing up everywhere in the towns near New Haven and Hartford. Clocks were being manufactured; screws, bolts, shoes, furniture, cloth—some for the China packet trade, some for shipment to the opening markets of the western territories. The young dentist had heard Mr. Whitman explain many times how a man, young, enterprising, full of energy, could make money.

"I never liked business," he said to Elizabeth. "It's too confining and dull. My father hated it. I do, too!" He began talking again about his plans.

"What I want to do is something important." He put out his hands. "You know," he leaned forward, his foot on the stone. "I feel . . . I know I have something in me that other people don't have."

It sounded so vague. "I don't know why I talk like this!"

But the girl, looking up at him, nodded. Her expression was serious. "It's not strange," she said.

She thought for a moment, tracing with her finger the pattern of her gown on her knee. Her schoolbooks lay beside her, where he had put them down.

"If you got started soon at studying medicine," she said, "I think that my mother . . ." and she flushed.

"I know!" His expression was gloomy. "She would be more impressed with a doctor."

A marsh hawk circled in the sky above them, then swooped down. There was a cry half heard in the deep, dry blanched grass.

She got up. "Nature can be so beautiful and so sad," she said.

He didn't answer. Nature and man, too! On the way home he repeated again what her father had said to him.

He was very ambitious, but also very sensitive, a combination sure to cause suffering. Every slight, every bit of criticism hurt him deeply.

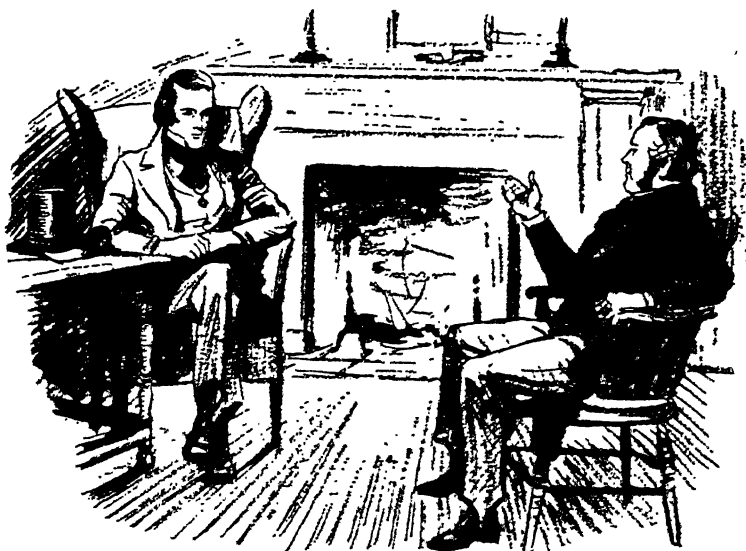
"Why do you think of it?" Elizabeth was much more calm, for all her gentleness, more practical, too.

"Why do you dwell on it?"

He shook his head. "I really can't blame him." His expression was bitter. He went back to his office, a front parlor in a widow's residence on the upper road, where a rocking chair with a raised back was his operating chair, and when a difficult case of toothdrawing presented itself he had to go to Hartford, by stage, to borrow the instruments.

What did he have? After all, how did he dare to present himself as a suitor to a family so respected, so solidly established as the Whitmans? If the history of the town of Farmington could be written in one word, that word was Whitman. Samuel Whitman, minister, a great and noted man, builder of the town's traditions of culture, had come before the first Indian dangers were cleared. He had held

the pulpit of the town church with honor and respect for half a century. Solomon Whitman, the first, his son, had served as town clerk and administrator. Solomon Whitman, second, a prosperous townsman and farmer; Solomon Whitman, third, inheritor of the family properties, businessman, farmer, distinguished townsman, reputable citizen.



He put the question to his teacher, Dr. Horace Wells.

No wonder that Elizabeth's parents had questioned him. Who was he? What were his prospects? What did he have in his head but hopes?

He slept on a couch in the long room that was his office. And it was only a natural fastidiousness that made him look well dressed and almost prosperous. He folded his cloak away at night always with the same fold so that

it shouldn't need pressing, and the coat in which he was seen was the only good one that he owned.

How much could a young man make at tooth plugging? He put the question to his teacher, Dr. Horace Wells, with whom he was studying three evenings a week in Hartford.

"The dentist who could find some means of preventing pain could make a fortune!" said Doctor Wells.

Morton smiled. Sometimes the lessons that he took from Doctor Wells were more concerned with theories than with practice. The Hartford dentist, who had once been a student of theology, loved new ideas. They aroused the greatest enthusiasm in him.

He had all sorts of interests. In a back room he tinkered with inventions. He had made several. But as for exploiting, marketing them? He had the inventor's temperament. Once a thing was worked out, he lost interest.

"What an inventor needs," he said, "is an honest, shrewd partner: honest for you, shrewd for the general public."

Tall, with a high bulging forehead, deep-set eyes, the lower part of his face had a genial expression. About the mouth, the full, ripe lips, there was something almost wistful. People liked him, referred gently to his many enthusiasms.

A skilled dentist, he was inclined sometimes to get tired of his practice. He had written a book—a monograph it might be called—on dentistry. It was well thought of by the profession.

Still there were days when he got tired of toothdrawing.

You had to cater to people. This wearied him. He complained to his student of pains in his chest and spells of dizziness.

"My physician tells me," he confided to William, "that there is nothing the matter with me." He paced the lamp-lit office, late one night, his hands under his coat. It was his habit to be quickly intimate with people, but just as rapidly he could part from his friends.

Morton stayed after his lessons and they talked together. Wells was a young man, only four years older than himself, but he was married and had an infant son. If he were not so restless, he could have had a very good practice, because actually he was a superb dentist, deft, quick, and always gentle.

"I hate to give pain," he said to Morton. In dentistry there was so much suffering!

To plug a tooth with metal, using a mallet and punch; to part an old root from the bone, lancing the gum first, using a claw extractor like a lever afterward; or even the probing of a cavity, the digging for a live nerve—if you had any feeling at all, you lived through every pang with your patient.

"The trouble is," Wells once said, "that there's always a human being attached to the tooth!"

His student could not help laughing, somewhat wryly. "And another human being attached to the forceps," he added.

Wells went on to tell him how he had seen two dogs fighting on Asylum Avenue, one day. "They bit each

other savagely, yet they seemed to feel no pain at all!"

Morton looked up interested. "How do you account for it?"

Wells rubbed his head, where the hair, as if from too much thought, was already receding in a half moon that seemed to make his forehead even higher. "I believe," he said, "that under the impulse of excitement, the body's sensibility to pain is lowered!"

"Then what about Mesmerism?" asked his student. But even as he asked the question he shrugged his shoulders. Everyone knew that only certain very sensitive people could be hypnotized, and this method displayed on the lecture stage was not too effective in the dental office.

"Well, I wouldn't care to draw out an impacted molar tonight, not even if the best Mesmerist in America were here to point his fingers at my patient," replied Wells.

He was more impatient than ever with dentistry, and leaving his office in charge of a neighbor, Doctor Riggs, also a student whom he had trained, Doctor Wells would go off on long walking trips through the hills of Avon, Glastonbury, and Simsbury.

Like the famous naturalist Audubon, he was interested in native birds. He drew their pictures crudely. Sometimes he talked of giving up the practice of dentistry altogether.

"I might go out and become a lecturer on birds!"

Morton dissuaded him.

"Perhaps if I moved to another city . . ." He suggested to Morton that they go together to Boston and open an office there.

"I was trained in Boston, I know the city well. Two enterprising men could do a great, great deal!" He treated Morton as an equal, recognizing the latent energy, the courage and daring he felt in his student.

From time to time he had lent money to Morton, taking the greatest interest in his progress.

"Yes, we'll set up together!"

In his Hartford office he would leave his good friend and colleague, Doctor Riggs, now practicing in the room adjacent.

"He can well manage both offices, his and mine." And to the patients of the older dentist, Doctor Riggs could simply say that Doctor Wells was out of the city for the time being for reasons of health.

"Meanwhile we will become established."

Morton went back to Farmington to close up his office and pack his belongings.

He did not call on the Whitmans. What use was there to go? And he had hardened himself to the thought of leaving without saying good-by to anyone.

A whole year, what had he accomplished? Was he any nearer to becoming a physician?

A man had to be something, he had to get somewhere. Mr. Whitman, who had put it diplomatically, was right. How audacious he had been to thrust his presence on Elizabeth's parents. It was best this way, simply to disappear, he reasoned with himself. But deep inside there was an urge that beat, that wouldn't listen to arguments.

Tying his bundles, he ran out of cord, and went hur-

riedly to the Odd and End Shop on High Street. Did he remember that at noontime the young lady students of Miss Porter's school sometimes went there to buy lozenges or ginger cakes, for a moment's nibbling?

In the prim, old-maidish smell of the neat little shop, he asked for string, lingered, and through the half-opened door glimpsed a familiar cloak and bonnet, blue, trimmed with cherry.

"Elizabeth . . . I . . . how is Miss Porter's School?" It was a ridiculous question to ask.

They went out together. He left the package of cord which he had chosen so carefully, over which he had lingered, and the bewildered proprietor of the shop shook her head in its ruffled cap, and looked after them.

"The school?" answered Elizabeth, ". . . very well. I will be graduated soon!" Her answer was polite, unimportant, but about her lips there was a look which seemed to say, "Where were you all this time? Why haven't you come?"

"I'm going to Boston." They stood at the crossroad now, near the town Common, alongside the rough-hewn stone set up for the soldiers of the Revolution who had marched there.

She lifted her eyes, "Why should you care what my . . . what anyone says to you?"

"I never will again!" His hand was on hers.

Riding in the new steam cars from Hartford with Doctor Wells the next day, he looked out on the patched countryside of fields and woods. The trees slid past. The

black plume of smoke from the pounding engine curled low, dipped toward the windows. The coach, like a wagon perched high on wheels, swayed and rattled over the iron rails.

He coughed with the smoke, struggled with the coach window, and turned a soot-grimed but elated face to his companion.

"Do you know," he said, "there are times when I feel . . . when I feel . . ." But the dangerous, pounding roar of the wheels, steel wheels on wood, shut out the rest of his remark.

"I shall be coming back, soon," he had promised Elizabeth.

The feeling of elation returned, filled his heart. He leaned back, closed his eyes. Dirt and soot beat on him. The pounding noise of the wheels was unceasing. But the dream under his closed lids grew. He was rich. He was successful. He was an accomplished student of medicine, well-established in the practice of dentistry, facing Mr. Whitman, showing him, showing the people of the town he had left—what could become of an obscure, young, unpracticed dentist!

* * * * *

In Boston he was a new person. The Willie Morton who had lived here as a clerk had vanished. The new William Morton, surgeon-dentist, set up at Tremont House with his colleague, Doctor Wells. The first impression in a new city, both agreed, was important.

They brushed their beavers, put on fresh stocks, but—

toned themselves into pale yellow gloves as suited professional gentlemen, and went out to look for an office.

They found a room on Tremont Row, one flight up from the street, good light, a good address. They equipped it with a bench for patients, an operating chair, a cupboard for instruments. Over the door they put a bell. They inserted announcements in the newspapers. And then they waited.

A few patients came, but the Boston people were conservative. It was necessary to assure them: a letter, a recommendation, a sponsorship from a professional gentleman.

"I know just the man who will help us," said Doctor Wells, who was resourceful in all new ventures. "We will call on Dr. Charles Thomas Jackson."

"A medical doctor?" asked his partner.

"Yes and no," answered Wells.

"What do you mean?" Morton was puzzled.

"He is the most extraordinary man of science in Boston," replied Wells. "He is a physician. He is a chemist. He is a noted geologist!"

"All in one?" William felt a nudge of jealousy. Suddenly his own hopes and plans seemed puny. How could one man know so much?

"You don't know Jackson," said Wells. "There's not another person like him . . . He won the Boyleston prize in chemistry, dissected victims of cholera with the most famous physicians of Europe . . . has served as public geologist for three states . . . and besides is noted all over the country as an inventor!"

Morton listened.

"They say that he, and not Samuel Morse, is the inventor of the new electric telegraph!"

Wells repeated the story, now famous, of how Jackson, traveling on the packet ship *Scully*, had met the disappointed portrait painter, Mr. Samuel F. B. Morse of New York. It was Jackson who had declared at the table one night that messages could be sent by electrical impulses, who had drawn diagrams, and had shown off his new magnetic devices purchased in Paris.

The discouraged portrait painter, who had a genius for tinkering, went home, and more than half a dozen years later got patents for a machine called "the electric telegraph."

"Jackson's idea," said Wells. "He is full of ideas!"

Morton looked at his friend quietly. "How much is an idea worth?" he asked.

"What do you mean?" Wells was astonished. He took his cloak from the peg, and followed his friend and partner downstairs.

Walking to Somerset Street, where Doctor Jackson lived and had his laboratory, Morton explained himself. "Well," he said, "let us suppose you have an idea. I have an idea. Of what use is it until it is proved?"

He had a practical and persistent mind. And in this quality he differed from his partner, to whom an idea was like a piece of fireworks. It went up. It made a beautiful pattern. You watched it. And then it was gone.

They found Jackson, a stocky, dark-faced, rather eccentric-looking man, clean-shaven, with sharp features. Under

his chin he had a narrow fringe or beard, like a collar.

His face had a hard, frozen quality, as if the jaws, the muscles under the skin were held too tense, masking some explosive force inside. And yet, this look breaking up, he could be suddenly affable, his eyes glowing, his voice warm.

He greeted Wells cordially, seemed to remember him, nodded at Morton, took them both into the laboratory which was connected by a covered passage with the house, large and pretentious, in which he lived with his family.

William was awed by the strange-smelling atmosphere of the laboratory. He had never seen so much equipment: pipes, flasks, burners, big bladders for holding vapors and gases! He passed from object to object, without the courage to touch anything or ask questions.

There were students in the laboratory. "I teach, too," said Doctor Jackson. "As you can see, my time is in great demand."

The students came up to him. They questioned him humbly. His voice was sharp, authoritative, and overbearing, but the information that came tumbling out, phrase on phrase, was impressive.

The man seemed stuffed with knowledge, seemed hardly able to contain it; and it was apparent that he loved to give it out: theory, information, keen scientific facts, all spilling forth with an air of, "see who I am, can you equal this?"

And around him people were always humble, as you would be humble before a tremendous waterfall. What matter if it was arrogance. It was also greatness.

Wells asked him humbly for a letter of recommendation. He gave it with a flourish. It was evident that he loved to bestow favors, not out of goodness of heart, but because it was so necessary to his nature that he should receive credit and thanks. That men should look up to him was his nourishment it seemed.

"There is no subject on which he is not informed!" said Doctor Wells, when they were going home together, down the slope of Tremont Row, past the three-story brick buildings, wedged in side by side securely, compactly, the best address in the city for a professional person.

"When a man knows so much," commented Morton, "how can he develop any one thing well?"

His mind was bewildered by the flow of the other man's knowledge. Yet he was impressed, too. "I believe," he said, "that I shall ask him to take me as a student."

"Student in what?" asked his partner.

"Chemistry!" It was a subject, he explained, which had always fascinated him.

Doctor Wells shrugged his shoulders. "So you mean to become a doctor yet?"

"Without question!"

"Too long for me," said Wells, and he made a nervous gesture with his hands as though already he felt impatient.

The two partners worked side by side in the office, or else they waited on the long bench for patients.

Doctor Wells became restless. Their practice was growing much too slowly, he said. "Now if we could really hit on something new, something to startle people with, then we could make money . . ." And he began to talk

of an invention he had left at home, a new type of dental sink.

"Why don't you stay?" William read his mind, knew what he was planning to say next.

"I can't!"

A brilliant, restless, tortured personality. To remain within four walls for any length of time was agony to him, and to stay fixed on one purpose, one object, was almost impossible.

"I'm going back to Hartford."

William remained in Boston, when his friend left, plugging doggedly at the hard job of building up a practice. After two years of dental practice, he said, it would be possible to put aside enough money for his whole medical education at Harvard. Mrs. Whitman would yet be impressed!

"I am really doing well and have hopes!"

His practice flourished. He was gentle and tactful with his patients, seemed grieved and sympathetic when he had to give them pain; pondered always the problem of how to spare suffering; and because they felt his compassion, they returned to him.

In the evenings, he studied in Doctor Jackson's laboratory, and because he listened with such rapt attention to the scientist, the latter took a liking to him, and much to William's surprise invited him, one day, to become a student-boarder in his home!

He accepted.

Now his life was eventful and interesting: new patients,

new people to deal with. Doctor Jackson approved him as a dentist, and even brought his wife and his aunt to be treated.

And then at night, in the laboratory, lit by the slanting shadows of wall lamps, he followed the dark-faced, eccentric scientist, whose boasting to the student was never offensive, for where he could learn, he was always humble.

Morton had a problem nowadays which he was always



Studied in Dr. Jackson's laboratory.

pondering. He had become interested in the manufacture of artificial teeth, and made them with such skill that he could honestly take pride in them as an artist.

But of what use were the sets? To insert them it was necessary to remove the roots of all old teeth. And no matter what he gave his patients, laudanum to drink, wine, or even if he took the risk of rubbing their gums with arsenic, still the result was the same: terrible, unbearable pain! Rather than endure it, most people preferred to be toothless.

Other dentists were more calloused. William Morton lay awake in the nights dreading the sufferings which the next day would bring for his patients.

He began to read, borrowing books from the ample library of Doctor Jackson. He looked up anodynes and the opinions of famous surgeons. "Pain kills," said Bouisson, noted surgeon of the Hotel Dieu in France. "It exhausts the powers of life. An operation which takes three-fourths of an hour will expose the patient to the risk of possible death!"

Opium, Morton had found, made his patients sleepy and languorous, but when the forceps was applied, they still cried out. He tried wine. The patients became unmanageable. Besides, many were teetotalers and would not take spirits, not even to spare themselves. Mesmerism, much talked of, was good only for those who were extremely suggestible.

Was it possible to stop pain?

In March, 1844, he had become a student of chemistry with Dr. Charles Thomas Jackson. A year later he could write to the parents of Elizabeth Whitman that his income from the practice of dentistry was increasing, that he was progressing well in his studies, and that he hoped soon to gain entry to the medical college of Harvard.

He went back to Farmington. He had been back several times during the winter for visits. And gradually the disinclination of Mr. and Mrs. Whitman gave way, or else they yielded to his persistence.

Now when he appeared on the doorstep, fine and

prosperous-looking in a new blue cloak, a tall beaver, the little girls of the house were likely to call out so clearly that it echoed, "Elizabeth, Elizabeth . . ." And the remark that followed always filled him with delight. "Your William is here!"

In the early spring he was able to bring good news, news that melted the last of Mrs. Whitman's fast-vanishing opposition.

"I have been accepted and will enter Harvard Medical School this autumn!"

He could also report to Elizabeth's father, in a private conversation, the amount of his earnings for the year, the first year of his practice in Boston. The total, carefully cast up in his ledgers, was impressive, amazing one might say for a young unknown practitioner, without previous means, starting out in what was one of the most conservative of cities!

But he had a faculty for melting opposition, for warming people to his projects. His office was popular now with many people of Boston, and his practice was rapidly growing.

"Impressive indeed," said Mr. Whitman. And his wife, having given way out of her Yankee fastness at last, became cordial and began to treat the young visiting dentist like a son.

The date was set for the wedding, May 29, 1844! only two years since he had come to Farmington with his half-empty portmanteau. For some people—could it be—that life moved faster? Happy as he was, he had the feeling,

sometimes, of being caught headlong on a stream, on an undertow, a deep current far beyond his command. Where was it flowing?

May 29, 1844. It was a quiet wedding. At home, the big formal parlors on either side of the hall in the white Whitman house were thrown open. The people of the town, all the finest families, attended.

Dr. Noah Porter, pastor of the Congregational Church, and father of Miss Sarah Porter, founder and headmistress of the Porter School, performed the ceremony. William Morton stood with his bride before the fireplace in the immaculate parlor, now flower-draped, where he had once not been welcome.

The glasses of spiced wine were passed, the health of the young couple was given.

"To think of it," someone said, "one year, and see what he's made of himself. There's more to that young man than the town of Farmington saw!"

The young couple departed by canal boat to New Haven, and from there by packet for Boston.

William sat on deck with his finger in an unopened book. Even on his wedding journey he had brought the medical textbooks he was studying. Elizabeth, wrapped in a soft gray cloak, her eyes shaded with her hand, sat beside him. They were quiet, both of them, as the packet, with sails filled, blew along the Sound, and rounding the Cape, they felt the deep pull of the open sea.

CHAPTER THREE

WILLIAM TOOK HIS BRIDE TO THE HOME OF DOCTOR Jackson where he was staying.

"I have chosen Doctor Jackson as my preceptor," William explained to Elizabeth. And he told her how he was being prepared by the chemist for his courses at Harvard.

"You may find him a little abrupt at times, perhaps," he suggested. "But please don't mind that. There's no one that knows more about chemistry."

For a time, Doctor Jackson, charmed by the young bride, was very gracious, almost gallant. And Mrs. Jackson, a small, quiet woman of the type who marry tempestuous husbands, was kind and friendly, too.

The two families ate together, and usually the conversation was pleasant. But one evening there was a very distressing scene at the table.

Doctor Jackson was late, everyone else was seated, and Mrs. Jackson had just given the sign to the maid to serve, when her husband came in.

At the look on his face, she half rose from the table. "Charles," she cried, "what has happened?"

He threw down an open newspaper, and in his passion he struck the table. "What God hath wrought?" he ex-

claimed. "They mean what Jackson hath wrought and Mr. Samuel F. B. Morse has stolen!"

They crowded round him to read, but he pushed them away. "There's no need to credit the lies of the newspapers!"

Yes, it was true, he said, that from Washington, Mr. Morse had sent a message over a device that he called the "electric telegraph."

"But whose discovery is it, his or mine?"

The newspaper called the invention a miracle. "Miracle, indeed!" he exclaimed. "The only miracle was that Morse met me on the packet ship *Scully*, and learned from me the secret of the electric telegraph. I walked the deck with him day after day, answering his questions. I took pity on Morse, and now he calls me a monomaniac!"

He got up to pace the room. His wife followed him. "Please, Charles, don't agitate yourself."

"I am not agitated. It is Morse who will be agitated, I promise you."

He addressed himself to William, and then to Elizabeth, who sat at the table without touching their food.

"Now the newspapers talk of him. Yet five years ago the *Boston Post* admitted that I was the discoverer."

"But didn't he experiment?" asked Elizabeth timidly.

Doctor Jackson turned to her, his face contorted, his lips blue. "Let him tinker," he cried. "Let Morse hold the patents. Let him spend his life worrying Congress to get the money to perfect the invention.

"Let him sweat more. The idea is still mine. It was al-

ways mine. And I shall not spare his health to prove it!"

When Elizabeth was alone with her husband, she turned to him. "How long has this struggle been going on?"

"Twelve years," he answered.

She shivered. "I have never seen such hatred!"

The next morning, as though she could not shake off the memory, she went on speaking, holding her chin in her hand at the small table in their room where she ate breakfast with her husband.

"Doctor Jackson is wrong," she said. "How can he claim the discovery? Mr. Morse did the work. As I've heard it, he made all the sacrifices."

Her husband agreed with her.

"But you don't know Jackson," he said.

"I doubt that I want to. It was horrible. It was like looking into a pit!"

Yet at other times Doctor Jackson could be kind, she had noticed, even over-generous. She was aware how much help he gave to her husband.

"And yet somehow," she said one evening, "I feel it's because he wants to be above people, and not because he wants really to help them! I think that if you were to know something that he didn't, he would hate you for it."

William smiled. "Small danger of that," he answered, and he kissed the finger that she pointed at him.

"Just now I'm the one that's learning."

He was to be enrolled at last at the Harvard Medical College, and Doctor Jackson was preparing him in chem-

istry. He worked many hours in the big chemical laboratory of the chemist. There, too, he tinkered with some dental experiments he had recently been making.

He had invented a new method for soldering artificial teeth into a gold plate. "But what's the use of it?" he complained to Doctor Jackson one evening. "When teeth have to be taken, my patients lose their courage because of the pain. And I don't know that I blame them."

The problem that was puzzling him now, he confided, was a difficult one. "Not a matter of soldering metals, or gadgets." Such problems, he said, were somehow easy enough to solve.

"Then what troubles you?"

William shook his head. He did not go on to say that he was constantly concerned with the thought of how to spare his patients pain.

Would Doctor Jackson understand it? Was there a compassionate side to his nature? Would he care if people suffered?

One morning William had a particularly distressing session with a young woman who came to him. She had an inflamed and aching tooth, which he told her would have to be cleaned out and plugged.

But at every touch of the probe she sprang from the chair.

Some people could bear pain better than others. Their nervous systems were differently organized. But this young woman's suffering was so intense that at last she faced him trembling. "Give me something, anything, anything at all

to stop the pain. I don't care what it is," she cried.

It was hot in the office on Tremont Row. In July, lower Boston, cut off from winds by the hills behind the Bay, was like a basin of heat.

He felt exhausted.

"Come back tomorrow," he said.

"But not unless you can give me something."

He promised.

But what could he give her? Wine, laudanum, arsenic rubbed on the gum? He had tried all these remedies. He knew they were useless.

That night he sought out Doctor Jackson in his laboratory.

"What do you want?" The chemist, who looked harassed and bitter since the announcement of Morse's discovery, was curt.

William hesitated. "I need something to stop pain for a patient." And he began to outline the case, also the remedies he had considered.

Jackson, who had been irritable before, laughed. "They won't do any more good than water."

William agreed. "But what else can I use?"

The chemist put his hand to his face. "I have a remedy if you're willing to try it."

William was eager. Was it some secret formula? He had always been impressed with the chemist's seemingly endless knowledge.

"Nothing of the kind. Simply chloric ether."

"What is it?"

"Ether! Ether!" cried the chemist. "Have you never heard of 'ether frolics'?"

"You mean when students inhale the fumes and get drunk?" William leaned eagerly over the chemist's desk.

"But what is the nature of this substance? How does it work?"

Jackson, who loved to answer questions, who loved to dominate by giving information, showing his knowledge, began to explain.

"Ether," he said, "is a volatile liquid which gives off fumes. These vapors are dangerous." In Philadelphia a group of medical students had inhaled ether too strongly. Several became seriously ill. And one student died.

"Then how can you use it?"

"For a tooth? Oh, that's another matter altogether. Just put in a few drops and plug it well with cotton."

"Has it ever been used?"

"Once," laughed Jackson, "at my suggestion." Early in his practice as a physician, for he had been a doctor before turning to chemistry, a patient had rung his bell late at night. He had a violent toothache and refused to go home until something was done for him.

"What did you do?"

"I had to get some sleep," said the chemist, "so I gave him a bottle of chloric ether, the only thing I had handy, and told him it was a new type of toothache drops."

"Good heavens! Wasn't it dangerous?"

"I told him to put it in his tooth, and I warned him not to smell it, saying he'd have a longer sleep than he bar-

gained for if he did. But actually there was no danger. I believe there were only two or three drops of ether in the bottle."

"Did he use it?"

"Indeed he did, and came back the next day to ask for more. But I couldn't be troubled, and told him I didn't have any."

"Could I have some?" William tried to speak calmly.

"Why not?" The chemist got up, opened a glass cupboard, took out a bottle of colorless liquid, and gave it to his student.

William opened the stopper and put his nose to the bottle. The strange, cold, sweet odor made him dizzy.

"I told you not to inhale it," warned Jackson. "Just keep the bottle well stopped."

William could hardly wait for morning and the visit of Miss Parrot.

"I have something which will stop your pain."

Anxiously he poured a little on a bit of cotton, and packed the tooth. He sealed the opening carefully with wax.

The young woman looked at him. "I do believe," she said wonderingly, "that my pain is vanishing."

The next day she returned. He repeated the treatment. Several times he packed the tooth with fresh wads of cotton soaked in the colorless liquid which had such a strange, strong smell.

The sweet, slightly nauseating odor clung to his fingers and to his clothes. He could not get rid of it. And some-

times it made his head spin and his legs felt weak as though he would fall.

People were queer, he thought. Very often he tried to suggest to his patients that they felt no pain. And here he was believing himself that a smell, a mere vapor could affect him.

After a week of treatments on his patient, who was no longer nervous, he found that he could probe her tooth without causing her pain. He took out the nerve, completed the filling. She was very much gratified.

"Whatever you used, it was a most remarkable remedy!"

He went to Doctor Jackson. "May I have more drops?"

But Jackson seemed annoyed, did not even ask for the outcome of the experiment. He simply said sourly, "I don't have any, and I haven't the time to make more."

A few days later the chemist brought both his wife and his aunt to Morton's office. Both had to have teeth probed and plugged. Both were very agitated at the thought of the pain.

Mrs. Jackson even cried out, "Charles, can't you give me something?"

He shook his head. "I know of no remedy."

William was puzzled.

He spoke to his wife later, telling her the story that Jackson had told him, and relating to her the success he had had with Miss Parrot and the "toothache drops" that the chemist had given him.

He began to read about ether, borrowing Doctor Jackson's books. The opinions of the textbooks were always the

same. Ether was dangerous. Ether would surely kill.

"Still," said William to Elizabeth, "if I had some, I would like to make an experiment. I would like to try the drops again, but in a different way."

Elizabeth looked at him with an expression of anxiety. "Oh, please don't!" she cried. "If it's so dangerous, maybe that's the reason why Doctor Jackson doesn't speak of it."

And again she urged him, "Please forget it."

Forget? How was it possible, he thought, when she had gone to bed and he was sitting alone under the night-lamp with his books.

What magic was there closed up in that bottle that could stop pain?

He found it hard to sleep.

"If you go on in this way," said Elizabeth, awaking at dawn and finding him still at his books, "then you will certainly make yourself ill."

He had grown thin, his eyes were shadowed, and at every sound he quivered. But he did not stop studying, getting up early in the morning, working late at night.

If he knew more about chemistry, would the secret of ether be laid open to him? He stumbled through the books of formulas which were strange to him, and theories which he could not understand.

But he no longer asked Doctor Jackson questions.

As the summer heat increased, he grew more weary, and at the same time more impatient with himself. He knew so little. He had so far to go!

"Now if ever you should take care of yourself," warned

Elizabeth. He scarcely spoke to her and hardly slept.

"Later!" he said. "Later!"

There was an epidemic of summer fever in the city. He fell ill. The doctor came and said he must be taken at once into the country, away from the city heat.

A carriage was hired. They went to Farmington. For two months, William lay ill in his father-in-law's house.

But when the heat passed and the cooler days came, he felt better. One day, looking out from the bed curtains, propped up and leaning on his elbow, he talked with his brother-in-law, Francis Whitman.

"Go to the apothecary," he said, "and get me a bottle of chloric ether."

He lay on the bed later, holding the little flask of clear liquid in his hand. What if a person should inhale from that bottle, he wondered. What would be the sensation—death or sleep?

This was a thought that had occurred to him again and again in his illness. He thought of Elizabeth. Was it fair he should try?

He was better now, getting up, going out on the lawn, coming in again to lie down. One afternoon, when the house was quiet, he took the bottle from under his pillow.

Quickly he poured a few drops on his handkerchief and pressed it to his nose. The smell was stifling, it made him choke.

And then this sensation passed and a wonderful feeling of exhilaration streamed through his body. His legs shot

up. He twisted on the bed, and he could not keep from laughing, almost screaming.

Afterward he had a stupefying headache, as though he had taken too much wine. Elizabeth, coming in with some books from the library, put them down.

She came toward him. "What's the matter? Are you ill?"

He was lying across the bed. His face was flushed, and he had put a cold towel to his head.

There was a strange smell in the room. "Whatever is that odor?"

But he did not answer her. The ether had failed. Instead of numbing his senses, as it had numbed the nerve in Miss Parrot's tooth, the effect had been one of wild, intoxicating exhilaration.

Still the young men of whom Doctor Jackson had told him, had been put to sleep by the ether fumes. Was it possible that he could not credit this story?

He began to experiment with the animals and insects in the barnyard. He tried to put to sleep the big green worms that hung on the trellised leaves of the grape arbor. He trapped a robin and held it in a handkerchief soaked in the sweet, cloying scent.

But the bird struggled and flew away, and the rooster and chickens on whom he tried his remedy simply went off with dizzy, indignant cluckings.

The experiments were not successful.

In the autumn he went back to Boston with Elizabeth. He had been accepted at Harvard, and enrolled as a medi-

cal student, going to his classes at five o'clock each day, when his work in the dental office was finished.

He threw himself into his studies with ardor. He dissected late at night in the odorous charnel room on Mason Street, under the slanting roof of the college, where the smoking lamps on the wall cast moving shadows, and the voices of the students at their slabs were hushed.

At first, the unpracticed eye saw only death, and then the hand gained skill, searched for the elusive nerve, the silver-sheathed tendon, so tenderly wrapped as if its use were for all time.

Even in disease, he saw, there was beauty: the cave of the heart, filled with the last full flow of purple blood, a dying stream; a tumor, strangely colored, gleaming and iridescent, as the scalpel disclosed it, like a jewel!

He walked the wards of the hospital; behind the senior surgeon, the entourage of silent students passed. The doctor paused at a bed. The students stood respectfully behind him. He made an examination. Each student stepped up, put the stethoscope to his ears, tried to hear the altered throb, the weaker rhythm he had been told to note.

The patient, silent under the flow of medical talk, his eyes large, full of anxiety, lay back submissive like a prisoner under sentence.

He looked from student to student. What was his fate? What would be the outcome of his malady? But they, like the professor, had learned to make their faces impassive.

Is the patient any more human to them than that other

mass lying on the dissection table? William wondered.

He witnessed his first operation. Dr. John Collins Warren was operating! The word passed from student to student. What a workman . . . what a showman . . . swift and certain . . . what hands . . . could anyone rival him?

The students climbed the four flights of stairs to the top of the hospital. They passed down the long corridor to the round, bowl-like room under the glass dome.

Rising in a steep semicircle were the rows of student seats. You sat with your knees clamped, looking down headlong as if into a well. Between the railing and your breast there was hardly room for the notebook. And the light, streaming round your shoulders, shone down into the amphitheater.

William always entered this room with awe. He was silent here. The others whispered. He thought of the countless sick who had suffered here the terrible ordeal of pain.

He sat quietly watching the preparations below for the operation.

The operating table was a big, heavy, velvet-padded chair, and the red upholstery, for some reason, was always dusty. The porter came in, beat the dust, started sneezing, stretched the chair out full like a table, and covered it with a sheet.

Behind the operating table, and brooding over it, as if over a white sacrificial slab, stood two mummies in painted Egyptian coffins.

Someone had once bequeathed to the hospital this pair from Thebes. During the early fund-raising days they had been rented out to traveling shows and museums. Now, for some reason, they were stored in the operating room, and the surgeons complained that they took the room needed for cupboards of instruments.

No one thought to remove them. No one seemed to think what the impression of the patient must be, when he was brought in and laid down, as if for sacrifice, at the feet of the ancient pair.

The students wait, squeezed in their seats, looking down into the well of the operating room. They whisper together. "An amputation . . . gangrene . . . yes, the leg . . . no one can do it better than Warren!"

Everyone looks up to the surgeon as if to a hero.

The door opens. He enters. The students rise. Doctor Warren is tall, lean, with long gray hair combed back immaculately. He is slightly bowed in his long black frock coat. His assistants follow him.

"Gentlemen!" The surgeon nods to the crowded tiers, to his assistants.

The dresser swings back the glass door of the instrument closet, and holds out the instrument case. The surgeon takes from the long narrow case of worn velvet, one of the straight amputation knives. He takes out also the short gleaming saw. It flashes like silver as he bends it.

The students in the rows above the operating well grow silent. The whispering has stopped. Every move is noted. Every gesture is written down.

With one movement the young men lean forward as the

house surgeon with deliberation puts the saw, two or three hooklike instruments, the tenacula, and the small sharp artery forceps on a chair.

He covers them with a towel. Then he threads a wisp of well-waxed hemp through his buttonhole, moistening the end of the thread with his lips, and pointing it with his fingers.

"Ready, sir," announces the assistant.

The surgeon turns back his cuffs.

Some doctors operate in an old bloodstained coat, worn at the sleeves, saved especially for this purpose. But Doctor Warren is immaculate. He allows the dresser to pin a white towel to his waistcoat, and he raises his hand.

At this signal, the doors open at the left, and the patient is brought in on a stretcher. He is a middle-aged man with sparse, reddish hair. He is pale and emaciated, the cheek bones standing out, the eyes sunken with a look of resignation as if he were already past pain and fear.

Many people prefer to die rather than face the terror of the operating room.

There is a tension now and utter silence in the room, except for the slight, quick murmur between the house surgeon and Doctor Warren. Neither glance at the patient. How else could they nerve themselves?

Sometimes surgeons weep at the ordeal of the operation.

"Ready . . ." The house surgeon speaks.

Doctor Warren nods.

The surgical instruments under the cloth are still covered.

The patient is put on the operating table. The covers

are drawn back. The sick limb with its ugly wound is exposed.

And then quickly, the straps are thrown over, drawn tight, and the clamps are closed. The sick man's arms, his chest, are bound down. The leg which is not to be operated on is tied firmly.

One dresser, at the top of the table, holds the patient's head.

"Now!"

The other dressers move forward. The sick man's head is lifted, a second dose of laudanum is given.

And now a bandage is applied at the top of the thigh, tight, tighter, to shut off circulation, easing a little of the pain. The leg gets purple, the blood flowing down.

"Now!"

The sick man moves his lips. No one listens. No one hears what he's saying.

The house surgeon holds the limb, extending it in position for the amputation. The patient moans. The flesh of the sick limb is tender.

The surgeon, with his left hand, grasps the thigh. The knife is poised.

"If you have a cut to make, make it!" This is the dictum of all great surgeons.

A quick thrust into the flesh. The cry that resounds against the high glass dome is not human. Blood wells from the wound . . .

The students tense themselves. Every hand is on the rail. Every hand is tight.

Now the surgeon must work fast, for pain prolonged might kill just like hemorrhage!

Two or three rapid slicing movements. Under the leather thongs, under the restraining arms of the dressers, the patient's body has risen in an arc of agony.

The surgeon, pale, his face muscles rigid, sweat on his forehead, works in silence. The patient's lips are swollen, his face is yellow. He is sobbing for breath.

A sponge is passed over his lips.

Another cut, upward. The body under the thongs rises again. The upper flap is made. Under go the fingers, under the newly-cut flesh to hold it back.

Another thrust, below . . . two more cuts upward . . . the lower flap is made. Under goes the thumb of the surgeon and holds back the flap.

The bone shows out clean.

The dresser takes the knife away. He hands up the saw. The surgeon takes it, hesitates for a breath, and then in an instant of silence, between the cries of the patient, the sickening sound is heard. . . . Half a dozen strokes . . . the limb drops off into the pail!

"It's off . . . thirty seconds!" someone whispers. Was there ever an operator like Warren?

The sick man is gasping through swollen lips. His face is puffed, discolored. He has no more strength to scream and he cannot struggle.

Speed, speed now if the life of the sick man is to be saved.

Speed, speed—the silver hook flashes in the expert sure

fingers of the surgeon: he feels for the femoral artery, grasps it, draws it forward. It is tied with two ligatures.

The forceps dip swiftly into the red, bleeding mass, and five or six blood vessels are brought up and fastened with a single thread. A woman could not knot a thread on a gown so quickly.

Speed, speed . . . the sick man seems shrunken, his



It would be easier to operate than to watch.

body shriveled. He is moaning with eyes half-closed. A convulsive shiver runs through his body.

From his high seat, William looks down, feels a rivulet of sweat under his clothes and is aware that his hands, pressed tight on the rail, are slippery.

It would be easier to operate than to watch. He breathes suddenly as if he had not been breathing before, and the breath is like a sob in his lungs.

Speed, speed—! A strip of wet lint is put between the flaps and the stump is raised and bandaged.

“It’s over!”

“One minute, forty-five seconds . . .” There is always someone hard-minded enough to time the operation as though it were a race.

“Off . . . it’s really off . . . it’s over!” The dresser murmurs the good news. The limb is held up, smeared and bloody.

But the sick man does not look. He is carried out by the dressers.

The students, filing down the narrow stairs between the slanted seats, into the well of the theater, past the instrument cases, past the impassive mummies, are talking suddenly in the relief that comes after the tension of the operation.

They are talking of Warren.

“And in one minute, forty-five seconds! Can you believe it? Like a magician, a miracle man, I swear!”

There are exclamations of wonder. Some of the students stop at the instrument closet and gaze at the knife.

“Can you see? It has notches!”

Only Morton, coming down the stairs, past the blood-stained table, closing the door, the last of those to leave the operating room, wonders.

“How long should such suffering endure?”

CHAPTER FOUR

IT WAS EARLY IN JANUARY. THE WIND FROM THE CHARLES River, blowing up Tremont Row, was filled with snow. It swept the women's skirts out like balloons, and the men, walking against the slant of the blowing snow, pressed their beavers down and held close their cloaks, which otherwise blew out like sails.

"What a day!" Doctor Morton hurried to his office, and before he could shake out his cloak, which was heavy with snow and wet, there was a tinkle of the bell, and his first patients for the day had arrived.

They were a couple from Canada, Mr. and Mrs. Joseph Walton, friendly and talkative. They were staying in Boston for a few days and had been recommended to him as "one of the finest of dentists."

He spent two hours with them, working first on the husband and then on the wife. There were no other appointments for the morning, and so he did not hurry. When his patients were not nervous or jumpy and he did not have to inflict pain, he rather enjoyed the routine of his work: the click of the instruments, the smooth, deft mixing of materials, and the feeling of craftsmanship when quickly and accurately you filled up a cavity with gold, and the patient was satisfied.

He was working quietly. The friendly man and his wife, tired out at last, had stopped talking. How he hated this nervous need for conversation! Futile, useless questions, the remarks offered and the answers given which were all the same, when all the time his mind was busy with the medical lectures he had heard, the surgical cases he had seen in walking the wards, the outlines of his studies on which he would have to stand examination.

At the end of the morning he hoped to have half an hour to study. He had made no other appointments, and so he was very much surprised to hear the bell ring at the outer door.

"Excuse me!" He left the patient in the chair. "I will be back directly."

But it was a good half hour before he came back. In the outer office he had found a totally unexpected visitor—his former partner and teacher, Dr. Horace Wells, of Hartford.

He had a portmanteau filled with equipment, and he greeted Doctor Morton with excitement. "I have discovered an agent for extracting teeth without pain," he said.

"What?" Morton forgot his patients, forgot even that the door to the inner room stood half open. He thought at once of the ether drops Jackson had given him and which he had used, the summer before, with such good effect in Miss Parrot's tooth.

"Is it drops? Do you put it into the tooth?"

"No," answered Wells and his look was one of hiding a secret. "It's a vapor," he explained. "You inhale it!"

"But what is it? What do you call it? How does it take effect?"

Doctor Wells, with a look of elation, had opened his portmanteau. He took out a black India-rubber bag. It had a tube and a nozzle.

"With that?" Morton looked at it curiously.

Doctor Wells nodded his head.

"Now really, Wells," Morton was disappointed, almost skeptical. He had seen such devices on the lecture platform. There were speakers, half quack, half charlatan, who displayed chemical tricks, traveled from town to town.

"You doubt me?" Wells, his face flushed, was suddenly angry. "You don't believe my claims?"

"It isn't that I doubt you," answered Doctor Morton gently. "But how . . ." he touched the bag, "can this vapor stop pain?"

"You inhale," replied Wells. "You draw the vapor into your lungs."

"And then?" Morton was patient and suddenly tense.

"You become completely insensible. You feel nothing!"

Morton looked at him. A vapor? What could it be? He remembered his own unsuccessful experiment in Farmington, with the bottle of ether. But it couldn't be ether. Ether was given from a bottle or a sponge, at least this was the direction of the books on *Materia Medica* which he had been studying.

He shook his head. Wells might be a good dentist, but hadn't he often been overenthusiastic about those inven-

tions of his which in the end never worked?

"I would have to see it," he said.

Wells seemed hurt, and sprang up with an impatient motion. "I have done it, and can do it again!"

From the inner office, Morton's patient was calling. He excused himself, went back, completed the work that he had to do, and dismissed the couple.

When he came out again, Doctor Wells faced him. His face was flushed. "Just give me a subject and then I'll show you!"

"I'm willing," answered Morton. "Who will it be?"

"That's the very problem," Wells replied, and he looked dejected. He had come up from Hartford several days before, taking a room near the Tremont House. He had put an advertisement in the papers, saying he would extract teeth without pain, free of charge!

But no one came. He went to call on some of the dentists of the city whom he knew, asking their help. They were skeptical.

"I have no patient who is suitable," said Morton, after thinking a moment, "but I'm willing to help you."

He asked his former partner to describe the cases he had treated with the help of the new vapor, which the latter secretively would not name.

"Why, I had my own tooth drawn in this way," exclaimed Wells, and opening his mouth, he pointed to the spot as though proof lay in that pink, smooth hollow.

"If you are certain," said Morton, "then this is a matter for medical authorities."

"Who?" Wells looked at his hands.

"What about Jackson?"

His former partner shook his head and made a dejected gesture with his shoulders.

"So you've been there?"

"Yes."

Morton, kneeling down to examine the black India-rubber bag again, nodded with sympathy. He knew Jackson's outlook, his overmastering sense of authority.

It was of no use to come to him with an idea. All ideas were old to him. They had been tried before. And at once with overbearing knowledge he would begin to quote book, page, experiment on experiment, one famous authority after another, until finally you were paralyzed, overwhelmed!

"Oh, Jackson!" said Morton. "He knows too much."

Wells was stirred by his former partner's sympathy, and began, although he had not meant to do so, to tell the story of the discovery and how it had come about from an evening's entertainment.

"It was on the evening of December 10," he said, and his look was fervent, as though all the world should remember the date.

He had gone with his wife to an exhibition given by a traveling lecturer in Union Hall, at the corner of Main Street and Pearl, in Hartford.

Morton nodded. He knew the building. It was a place where marionette shows were sometimes given, or else "panorama" performances of "Pilgrim's Progress," with

the painted scenes depicted on life-size canvases unrolled from two rolls, held at opposite ends of the room. And shows of the ever-popular "chemical wonders" sometimes played for weeks.

The lecturer on this evening was a traveling performer, Mr. Gordon Q. Colton, and in this show he promised to demonstrate a gas which would make members of the audience perform amusing antics.

The hall was three-quarters full. People did not like to come out on a winter night. Doctor Wells and his wife, Elizabeth, attended. At one side of them, on the wooden bench, sat young Samuel Cooley, a tall, lanky boy, whom the people of the town knew as something of an experimenter. He worked in an apothecary shop, but he had also tried pistol making, and fancied himself too as a daguerreotypist.

He greeted Doctor and Mrs. Wells. "I have a fancy to try that gas," he said. There was an excited look on his long, eccentric face.

On their other side sat Mr. David Clarke, a flushed gentleman with side whiskers, whom Doctor Wells recognized as one of his patients. He inclined his head in formal greeting. Mrs. Wells smiled.

The hall was not quite full when the lecturer came out with a black bag, some inhaling equipment, and after an introductory speech called for volunteers to take the "exhilarating gas!"

Samuel Cooley stood up awkwardly. "I'll take it!"

He was called to the front of the room, sat down in the

chair and allowed the nozzle to be adjusted. He began to breathe quietly, for an instant seemed to be falling asleep. And then suddenly, his legs shot out. He pushed the nozzle away, jumped from the chair, started to laugh foolishly, made funny gestures with his hands. Finally, he leaped like a frog, which made everyone laugh, and then fell headlong over some benches with high backs which



Finally he leaped like a frog.

the lecturer had placed at the front of the hall to shield the audience from the impromptu performers.

"Oh!" a cry arose from the ladies.

Samuel Cooley seemed to come to himself, and in a daze got down the aisle. Doctor Wells rose to help him to his seat.

"You've hurt yourself!" he cried.

There was blood on the young man's trouser leg.

"What?" said Cooley. His face was flushed.

Doctor Wells knelt down, lifted away the cloth from the flesh.

"Oh!" cried Mrs. Wells. The whole leg was scraped.

"Isn't it strange," said the young daguerreotypist, "I don't feel any pain!"

"And when you fell?" Wells, suddenly excited, stopped with the handkerchief poised in his hand.

Cooley shook his head. "Did I fall?" He seemed dazed still. He was pale and sweating.

"Ah, now," he said, and he drew his breath in, "now it's beginning to smart!"

He rolled down the trouser leg gingerly. Doctor Wells, back in the seat, began to question him. "Recall!" he urged. "Try carefully to remember. Did you feel anything?"

"Nothing. Nothing at all!" answered Samuel Cooley.

Doctor Wells turned to his neighbor, Mr. Clarke. "Do you hear that, sir?" he exclaimed. "I believe a man by taking that gas could have a tooth extracted, or a limb amputated, and not feel the pain!"

"Nonsense," declared Mr. Clarke.

"Hush!" whispered Mrs. Wells. The demonstration had started and the lecturer was calling for volunteers to take the vapor. He now called it "laughing gas," because it made those who took it shake with uncontrolled mirth and exhilaration.

Doctor Wells jumped up. "I'll take it!"

"Oh, no!" His wife, putting out a gloved hand, tried to restrain him. "What will people think of you?"

He brushed past her, sat down in the chair, took the nozzle from the hand of the lecturer, inhaled the gas deeply. He jumped around as the other young men had done. The audience laughed. His wife was mortified.

On their way home, climbing Asylum Hill together, in the snow, she scolded him. "You made a spectacle of yourself."

With his long cloak and tall beaver silhouetted in the moonlight, he faced her in the snowy silent street. "How else," he exclaimed, "do you suppose that discoveries are made?"

"Samuel Cooley's bloody knee! Ridiculous!"

"Please, Elizabeth!"

He took her home, and returned at once to his office. He woke his colleague, Dr. John M. Riggs, who practiced and slept next door.

"What do you know about exhilarating gas?" he said.

Riggs was puzzled. "You mean nitrous oxide gas?"

"Yes, yes!"

Riggs had gone to medical school briefly and he had a good library. He took down a volume. "There's nothing better than Sir Humphrey Davy."

They hunted out a passage. Wells was stunned by it. "Why look! Look what he said!" And he read the paragraph written forty years before, to which no medical commentator had since referred.

"As nitrous oxide in its extensive operations appears capable of *destroying* physical pain, it may probably be used with advantage during surgical operations!"

"Do you hear?" cried Wells. "Can you believe it?"

Riggs faced him. "What do you propose to do?"

"Try the gas, of course!"

"On whom?" The other dentist seemed frightened.

"On myself," answered Wells, and he confided that he had already made arrangements with Mr. Colton to come to his office the next morning and bring the black bag.

"You will pull a tooth for me!"

"Oh, no!" Riggs objected at first, and then, swept by the other's enthusiasm, he agreed. "I'm glad it's not ether," he commented. When they were talking later he recalled the "ether frolics" of his student days at Washington College in Hartford, where the professor of chemistry had warned that the fumes of sulphuric ether might kill, but that nitrous oxide gas could be inhaled without danger to life.

"There, you see!" Wells was exuberant.

The next morning at nine o'clock the experiment was performed. Mr. Colton came with a portmanteau of equipment. Doctor Riggs laid out his instruments, and Samuel Cooley, the apothecary's assistant, who had been invited as a witness, stood against the wall watching.

Wells sat down in the chair.

"Now," he said.

Mr. Colton adjusted the bag, and gave him the nozzle.

He inhaled deeply, closing his eyes as he did so. After a moment his head fell back, and although he mumbled and made convulsive movements with his face, when the lecturer lifted his hand it fell back as though lifeless.

Doctor Riggs bent over his friend and opened his mouth. There seemed no muscular tension. Applying the forceps to the tooth, a large molar, he braced himself.

Twice he grasped the tooth, twice it remained in the socket. It was a deep back tooth, securely anchored, and required a great deal of force. But Wells lay still. Except for a fitful mumbling he made no sound. There seemed no evidence of pain. At last, with a final wrench, the tooth was out.

"I can't believe it!" exclaimed Doctor Riggs, still holding the bloody object.

Cooley rubbed his leg, sore from last night's adventure, but he did not speak.

After a moment Wells opened his eyes. He seemed dazed. Then he saw the tooth still hanging in the forceps held loosely in Riggs's hand.

His hand went to his mouth with astonishment. He jumped up. "A new era in tooth pulling!"

He began to question Colton at once on how to make the gas and how to give it.

A week later, to Doctor Wells's office came Mr. David Clarke, the gentleman who so skeptically had replied at Union Hall, "What nonsense!"

Mr. Clarke had a badly abscessed tooth, and very timidly now he sat in the dental chair.

As Doctor Wells recounted the story to his friend, William Morton, he laughed. "You can imagine that he changed his opinion when I took his tooth with the gas, and he woke up to tell me that he felt no pain."

"Mr. Clarke felt nothing?" William was incredulous.

"Of course not. That's just what I've been telling you," said Wells.

Morton looked at him. "Can you repeat the operation at any time with success?"

"Indeed!" Wells was impatient. The sad thing, he repeated, was that he had no subject, and also no audience.

William jumped up. "Well, then, by all means let's find one."

"Where?"

"At the medical college, of course."

He took Doctor Wells to the Harvard Medical School, to his teachers. They went first to Dr. George Hayward, the professor of clinical surgery.

He listened to them coldly. "Quite interesting," he said, turning a high forehead and perfect Grecian features toward them. But his manner made their enthusiasm dwindle.

He regretted, he said, but he had no subject to offer.

Doctor Wells was despondent. "Now you can see what I encounter."

But Morton, who was aroused, shook his arm. "Let's go to Doctor Warren himself."

They found the great surgeon in his classroom already crowded with students. "Yes, gentlemen." He was about to begin his lecture. But he listened while Morton, whom he recognized as one of his students, began to talk enthusiastically, and Doctor Wells, without being introduced, interrupted. "All that I would require, sir, is a suitable subject upon whom to try my experiment, and I

would be very glad in that event to explain and demonstrate my discovery!"

Doctor Warren hesitated, then he sighed. "Science is too poor," he said, "to leave unheeded even the smallest hope of easing human suffering!"

He addressed the class. "Gentlemen," he began, "Doctor Wells of Connecticut is present and offers to address you on the subject of rendering the system insensible to pain during the performance of surgical operations by the inhalation of exhilarating gas.

"Those of you who are interested may follow Doctor Wells into the next study, where he will speak to you about the coming demonstration."

The whole class rose.

Doctor Wells, in the next room, addressed them. "I will conduct the demonstration tonight," he said. "But first I must have a suitable subject."

A young man offered himself. He had an aching tooth, he said, and he would be glad to have it taken by any means that would avoid pain.

At this remark some of the students laughed.

Doctor Wells looked around at them. His face was flushed. He seemed excited, and he spoke nervously. "Come tonight," he announced, "and you will all witness an operation while the patient is under gas."

There was a buzz of excitement as the students crowded out.

That night the lecture room was packed. Doctor Wells

came in with a bag of dental instruments that he had borrowed from his friend Morton.

He was very nervous, flushing and growing pale by turns, and Morton noticed that his hands trembled, and that several times he dropped the instruments and fumbled with the black bag that he carried.

Finally the bag was adjusted, the operating chair was in place, and the young man was called forward. He sat down in the chair, gripping the handles, his face suddenly so pale that the dark freckles stood out.

Doctor Wells was perspiring and he wiped his forehead with his handkerchief, as the young men crowded forward to watch.

Nervously he lifted the black bladder filled with gas. Nervously he adjusted the nozzle over the young man's face.

"Breathe deeply," he whispered. He fumbled for the forceps. Morton, who stood near him, could see that he was very agitated. Before the patient had taken two gulps of the gas, Wells whipped off the nozzle.

"See," he cried. "He is asleep." But as Doctor Wells reached for his instrument, and located the tooth, the boy's eyelids flickered.

"You will see, gentlemen, that there will be no pain, absolutely no pain."

He braced himself. One yank and the tooth was out. But the patient, leaping high into the air, screamed, clapped his hand to his cheek, and stamped with pain!

The audience screamed, too—with laughter. The sound

grew and grew. Doctor Warren laughed, and Morton, too. There was not a man in the room who could control himself.

Doctor Wells stood still. He flushed and then got pale, so pale that the color even left his eyes, and for a moment it seemed that he would faint.

Then before anyone could speak, could get up, could get to him, he snatched up the bag of instruments and was gone.

"Gentlemen! Gentlemen!" Doctor Warren held up his hand. The boy whose tooth had been drawn had collapsed in a chair. Yet half an hour later he insisted to those who asked him, that he felt nothing.

"Self-suggestion . . . Mesmerism . . ." laughed the students.

Morton ran after his friend, down the corridor, along the yard, into the street. But he could not find him. And then on Tremont Row he turned home. He did not know, he realized, the address or the place at which his friend and former partner was staying.

In the morning, when he came to his office, he found the bag and the instruments which Wells had borrowed, at the door. He had gone back to Hartford!

It was six months later that Morton saw him again. He went to Hartford on business, and called at the home of Doctor Wells to adjust some items of their former partnership.

He found the dentist nervous, distracted, and irritable.

His face was fuller, but it seemed puffed, and the color was florid. He had given up his practice and he was engaged, he announced, on a new profession: conducting an exhibition of birds through the towns of Connecticut.

There were stuffed birds and colored lecture plates everywhere.

"This work out of doors, and sometimes before the public, is exhilarating," he said, "and it will afford me better health!" He talked about the symptoms he suffered, pains in the chest, dizziness, a numbness of the limbs, and a most distracting ringing of the ears.

His eyes were sunken, his lips tense, slightly bluish in tinge, and he was continually rubbing the back of his head as though it hurt him.

He went with Morton to Doctor Riggs's office, where his ledgers and accounts were kept. There the three dentists eventually talked about tooth plugging and extractions.

"What of the exhilarating gas?" asked his former student. The subject had been very much on his mind. Doctor Wells had claimed that pain could be stopped. Was it possible?

He put the question directly to his former teacher and partner.

Wells, looking away, did not meet his glance. "I have abandoned the experiments," he said. His voice was low, almost a mumble.

Morton could not make up his mind whether his friend was furtive or disappointed.

How could a man stop experimenting? How was it possible?

He went home. There would be no trip to Farmington this summer. Elizabeth was still living with him in lodgings. But they couldn't go on in this way much longer. He had promised himself a real home for his family, on a farm that he had been looking at in West Needham. Already he had begun to make plans for the buildings: an ample house for himself, a smaller cottage for his parents. And there should be a playhouse and swings and a goldfish pond for the children.

A few days after his return, his first son was born, a healthy boy who cried lustily.

"We will call him William James," said Elizabeth. She touched the baby's pink, curled hand with her finger. "William for his father and James for his grandfather."

When James Morton heard this news in Charlton, he said, "Then there will be two physicians in the family, my son and my grandson."

Yet William had written very little of late about his plans for returning to the medical school. Instead he often mentioned in his letters "a great work, an important problem on which with all my energies I am engaged."

But what this work was he did not confide to his father.

CHAPTER FIVE

THE BABY WAS STARTING TO WALK. "WE CAN'T HAVE the child in Boston for the summer!" said Elizabeth Morton to her husband.

During the two years of their marriage, William and his wife had been boarding—with nice people to be certain, occupying two bedrooms and a well-furnished parlor, in a big house with waxed floors, polished hallways—but still it was not a home of their own.

"Nothing here belongs to me," said Elizabeth. And to both of them it seemed impossible to begin housekeeping in a rented house, in the city. Their dream was of a country home, in a town shaded by trees, a town like Farmington.

In the spring of 1846, William bought a piece of beautiful country land, sixty acres of gently rolling hills and orchard, with a rambling brook and a pond. The new steam cars from Boston passed at the edge of the farm, so that a carriage and coachman would not be needed.

"I shall be able to go to the city every day," said William. At once work was begun on a country residence for himself, and a cottage for his parents.

"I want them near me!"

Since it was his habit to do everything intensely, he rushed the work on the new house, talking with the work-

men, designing a rustic bridge, building a playhouse with a piazza and windows and miniature furniture, and discussing ardently the plans for a mammoth barn with Gothic cupolas and spires, in which he hoped someday, he said, to breed prize cattle.

"You are spending too much," commented the elder Mrs. Morton, who had come to visit.

Her son laughed. "Do you know what my income is?" He was earning ten thousand dollars a year in his dental office.

He had several assistants. His brother-in-law, Francis Whitman, had come from Farmington to study dentistry with him. And there were two other young men, William Leavitt and Thomas Spear, whom he taught. They worked on patients under his supervision. The waiting room at Tremont Row was always packed. And the bell above the door rang incessantly.

One morning, he was showing the young men how to seal up spirits of ether in a tooth. "Gradually," he explained, "with this treatment the sensibility of the part will be destroyed and the feeling of the tooth will be numbed entirely."

Thomas Spear, who was handing the bottle to Doctor Morton, sniffed at it. He had large dark eyes, a pointed face with too much forehead, and a habit of twitching his nose like a rabbit when he was interested or eager.

"I thought," he said, "that ether was only for inhaling."

"Inhaling!" ejaculated the other assistant, William Lea-

vitt, a stocky boy, always serious. "What do you want to do, kill yourself?"

"I've breathed it and lived," announced Spear.

Morton turned to him. "You smelled ether?"

"Certainly." Spear's nose twitched and he blinked nervously. "I wasn't afraid," he said. "We had an ether frolic at the Lexington Academy, where I went to school, and I was one of the first ones to volunteer."

"What happened? What did you feel?" Morton took him by the shoulders. "Tell me exactly. Try to remember."

The boy seemed surprised at his eagerness. "My head was going around, my arms and legs got numb, and for a moment I had the strangest sensation."

"Yes, what was it?"

"I thought," said Spear, "I felt . . . I felt like a log floating down a river."

He flushed. William Leavitt laughed. But Doctor Morton surveyed the boy, who now looked quite embarrassed.

"You felt no sensation," he said slowly. "Isn't that what you mean?"

Spear nodded.

"Yes," he said, "it was like falling asleep. You're half awake, and then you aren't."

"Better not try it again," said Leavitt.

Doctor Morton was silent. Thoughtfully he put the bottle of ether on the shelf.

When the patients were gone and the boys had been sent home, he lit the lamp on his study table and sat down

to study. But the medical lectures this evening did not interest him.

He got up, took the bottle of ether in his hands, and, turning the colorless liquid to the light, studied it. What mystery lay in the bottle?

He took the stopper out. He smelled deeply. The sweet, cool odor filled his nostrils, went up into his head, and for a moment he had a sensation of blackness like ink spreading, and reaching for the chair, he slumped down.

Should he inhale? Did he dare? Thomas Spear had described a sensation of sleeping. But he remembered his own unpleasant experience in his father-in-law's bedroom, when he smelled the drops, and became so exhilarated that, ill as he was, he had leaped from the bed, screaming.

Why should the drops put Thomas Spear to sleep, and make him drunken? Could it be that the ether was faulty?

He put the bottle in his pocket and went down to the chemist's shop, near by. Usually he asked for Mr. Joseph Burnett, the owner. But tonight he did not. Mr. Burnett had once remarked, "What do you do with so much ether?"

He was glad to see that the apothecary was not in the shop.

"Give me a bottle of ether, pure ether," he said to the apprentice.

The boy handed him a vial. It had an old and dirty label: "sulphuric ether."

He took the bottle. "Is it pure?" he asked anxiously.

"Pure enough!" The boy turned to another customer.

Morton recognized him, Mr. Theodore Metcalf, a well-known chemist.

"What do you have there?" the chemist asked.

Morton showed him.

"I would be careful what I do with it," said Mr. Metcalf.

"Have you ever seen ether given?" asked Morton.

"Yes, oh, yes, indeed!" And the chemist began to relate an episode that had happened in one of his classes.

"I allowed my students to have an ether frolic once. They inhaled the fumes for sport."

"What happened?"

Mr. Metcalf laughed. "They leaped around like goats, and one boy hurt himself."

"Did he feel pain?" Morton asked.

"Why do you ask?" He hesitated and looked at Morton with a sideward glance. "As a matter of fact, he didn't. Although his leg was bleeding, he jumped around and went through the most amusing antics."

"And he felt nothing?"

The chemist shook his head. "Nothing."

Morton stood silent for a moment. "Tell me," he said, "how do you account for it?"

The chemist shrugged his shoulders. "Excitement! Nothing more." And he went out.

Morton looked after him, and the vial of ether in his hands seemed to quiver.

The next afternoon, when he went home to the country, the bottle of ether lay in his pocket. During the trip on the steam cars to West Needham, where the family now

lived, he touched the cool glass, and once or twice, as though his hands could not leave it, he took out the bottle. The strange sweet odor was all around him, it seemed to cling to his clothes.

When he got home it was still early. His wife, in a pretty white gown, was sitting on the porch with the baby. She held up the baby's hand to wave to him.

He came up to kiss her. She wrinkled her nose.

"What a strange smell. Whatever in the world is it?"

"Nothing," he said absently. Then his fingers came on the vial in his pocket. In the doorway he turned to her.

"Just think, Elizabeth, if someone were to make a discovery . . . if there should never again be pain in the world."

She gazed at him, shaking her head. "What a strange thought!" she said.

They went into the house together. She was carrying the little boy who wriggled over her shoulder toward his father. He put out his hands for the child.

"No," said his wife, "I don't think you should have him. You smell so queerly and it might not be good for the child."

"It's nothing," said William, "just a bottle of ether." His fingers were icy and his skin burned. He felt a profound excitement.

"I can't eat tonight. I have something to do in my room."

His wife looked after him strangely.

All evening he read from his medical textbooks. All the opinions of the experts were the same. Ether would kill.

Ether was dangerous. As for numbing pain, never once was the suggestion made anywhere.

Yet he couldn't forget the remark of Thomas Spear, "I felt completely insensible." And he pondered again the story of Mr. Metcalf about the student at the ether frolic who had hurt himself, but had shown no sign of pain.

In a tooth ether numbed all sensibility. When inhaled, ether made the student, Thomas Spear, go to sleep. What link was there between the tooth that did not hurt when ether touched it, and the numbness that his assistant had felt on inhaling the vapor?

All night he tossed and turned. Dark dreams oppressed him. In the morning he was haggard, quite numb mentally, and physically depressed. But the excitement that drove him had not subsided.

He went out to the garden and stood by the fishpond, moodily looking at the goldfish that flashed by.

Upstairs his wife was dressing. It was Sunday. She called from the window. "Are you ready for church?"

"I'm coming." But he sat down at the rim of the pool. Impulsively he took out his handkerchief, moistened it with ether from the bottle, and scooping up one of the golden flashing creatures with his hand, he folded it in the handkerchief.

He replaced the fish in the water. It floated inert, eyes glazed.

Had he killed it?

But as he leaned over the pool, the silken fins moved

once more, the glowing tail rippled, the fish was swimming!

He tried again and again. Each time the results were the same.

He got up and looked around with excitement for some other creature upon whom to try the experiment.

But at that moment his wife called from the open window. "Are you ready? I'm waiting."

He went into the house to meet her. In the doorway he felt a rush of movement against his legs. It was Nig, the black water spaniel his father had given him as a gift.

He put his hand down to touch the dog's head.

When he got home from church, he went out at once to look for the spaniel.

"Here, Nig! Here, Nig! Come with me!" He snapped his fingers as the dog came running. His whole body was one black wriggle of joy, friendly, trustful motion, tail wagging, ears flapping.

William looked down at him and a feeling of compunction squeezed his heart.

"Come, Nig! Come!"

They went down the path together, over the lawn, to the shade of a big tree by the fishpond. Nig watched the fish, bouncing about on his legs, and giving short barks of excitement.

William was pouring ether on his handkerchief.

He got down on one knee, and called to the dog, who suddenly stood still, one ear lifted, and then, sniffing suspiciously, bounced away.

"Come here, Nig! Here, boy!" He crept after the dog, but by this time all the fumes had evaporated from the handkerchief.

Twice he tried. Twice the animal wriggled away.

"You're a bad dog!" William said.

He went into the house and came back with a low, wide-mouthed glass jar. It would just hold the dog's muzzle, if he could get him down.

He poured the precious liquid into the jar. He caught the now fully suspicious animal. Squeezing Nig between his knees, almost sitting on the frantic spaniel, he forced his muzzle into the jar.

For an instant the dog struggled, digging up the dirt behind him with his legs. Then suddenly, between his knees, the spaniel lay still.

William removed the jar. He felt himself sweating. Was the animal dead? He bent down. "Nig," he called softly. "Oh, Nig."

There was no stir. He put his hand to the black furry coat and thought he could detect a faint heartbeat, but he wasn't certain.

He waited. One minute . . . two minutes . . . three minutes. Was the dog dying?

"Nig! Nig! Please, Nig!"

The dog stirred. His eyes opened. Feebly, with a bewildered look, he stood up. His eyes were red.

He shook himself, gave a strange, angry, frightened bark, leaped unsteadily into the air, tried to take a few steps, fumbled, and fell headlong into the fishpond.

William fished him out, a dazed, limp and sullen creature. He carried the dog into the house. The animal was shivering.

His wife came down to the kitchen. "What have you done to Nig?" she cried. The dog stood unsteadily in the pool of water dripping from his body. He continued to shiver.

Working over him with a towel, down on her knees in her pretty summer dress, she put her arms around the dog.

"Poor Nig! Poor, poor Nig!"

She turned to William. "It's that horrible stuff again. William, he reeks of it!"

William said nothing, but his experiments continued, with bugs, worms, with every creature on which he could get his hands.

On the grapevines he found big green wrinkled worms. He touched them with ether-saturated bits of linen, and they froze on the leaves and grew rigid, only to wake later as if from a daze. If you pricked one of the sleeping worms, it didn't stir. Could it be possible all sensation was destroyed?

He captured a hen in the chicken yard and put it to sleep. Then, wincing a little, he tried his knife on the drooping animal's comb and legs. No movement! Yet a few moments later when the hen walked away there were drops of blood in the sand.

He must make more experiments, more! He lost all interest in his patients. The affairs of his office were of no concern to him. There was work to be done on the house

and the grounds in West Needham, landscaping planned but unfinished, laborers to be instructed, painting to be supervised. His wife complained, "You neglect everything!"

The daily trip to the city now was burdensome. He hired a dentist, made arrangements to have him take over his business, and one morning, calling on his lawyer, Mr. R. H. Dana, on Tremont Row, he announced, "I wish to have Dr. G. Granville Hayden to superintend my office."

The other looked at him in astonishment. "I have an idea in my head connected with dentistry which will be one of the greatest things ever known," Morton said. "And I must take all my time to perfect it!"

The lawyer, who had advised him on various matters before, and who never had found the dentist visionary, looked up with surprise. "A secret?" he said. "What is it?"

"Something I discovered for extracting teeth without pain."

"Oh!" The lawyer smiled, his expression was quizzical. "Is it what your former partner Wells used?" Everyone knew the story of the experiment before the medical class at Harvard, and everyone was amused by it.

"No! Nothing like it!" cried Morton. "And no one has ever used it." And then he added, "I've tried it on various animals." He told the story of his experiments with Nig.

The lawyer shrugged his shoulders. Such matters seemed very nebulous compared with the good business which his client was putting in a stranger's hands.

He drew the papers.

When the elder Mrs. Morton, who was practical and hardminded, heard what he had done, she tried to plead with her son. "What," she said, "can be of more importance than your business?"

His attitude alarmed her. He seemed scarcely to hear what she said. "I have work to do, great work," he exclaimed.

She shook her head, turned away bitterly. What had come over him? What was this grandiose idea, so vague, about which he spoke, of ridding the world of pain? And his constant preoccupation with that bottle, the ugly smell that clung to him—it seemed like an illness to the family. Where they had joked at first, taking his preoccupations, his absorption, lightly, now, with a sense of foreboding, they were silent.

He spent whole days in experiments, scarcely spoke at mealtimes, hardly looked at his wife, and seemed to have no time even for the little boy of whom he had always been so fond.

"Da-da!" cried the baby, sitting on the floor, and he stretched out his arms. But his father seemed not to hear and went out.

"What has come over him?" cried the elder Mrs. Morton, who was present. Elizabeth turned away her head.

How changed he was! Almost like another person. And his appearance had altered, too. He lost weight. His clothes, always so beautifully fitted, because he was fond of look-

ing well, hung from his shoulders. His linen was crumpled. There were deep, dark shadows under his eyes. And always he was to be found near the fishpond, scooping up the goldfish in his hand, holding them in a handkerchief; picking off worms from the leaves, or else carrying off the protesting dog, Nig.

He tried, another day, to put the dog to sleep again, using the same wide-mouthed jar as before. But the suspicious animal, who growled whenever his master appeared, leaped into the air, upset the jar and ran away.

Morton was beside himself. "See what you've done!" With a desperate movement he knelt down, soaked up the quickly evaporating ether in his handkerchief, and put the handkerchief to his face.

He drew in deeply, sitting on the ground, near the broken jar. His eyelids drooped. His hand became heavy, and he was aware of a buzzing sensation in his head, half vision, half sound, as though a dizzy wheel were going round and round.

His hand dropped. He felt himself falling, and was not sure for a moment if he slept or not. When he came to himself, his head ached, and he felt nauseated. He was sitting on the ground and the handkerchief was still clutched in his hand.

What had happened? Where had he been? His knees were like water under him. After the weakness passed off, he was eager to try the experiment again, but he had no more ether. He went into town.

"Would you like to take some?" He spoke to Dr. Granville Hayden, the young dentist whom he had taken in to manage his office.

"Inhale ether? Not I!" Doctor Hayden shook his head. He was a tall, blond, bony young man with reddish side whiskers and faded blue eyes. He was intensely practical, not the type at all to be interested in experiments.

"Where do you think I could get more," asked Morton, and he added, "without going to Burnett's shop?"

Mr. Burnett's store of chemical supplies was located on Tremont Row, next to Morton's office, and Burnett's apprentices and helpers often came out in the street to talk with the dentist's assistants.

Morton, who had begun to fear for his secret, did not want Burnett to know for what purpose he purchased the ether.

"There's the firm of Brewers and Stevens on Washington Street," offered Doctor Hayden.

One of the boys, William Leavitt, was sent out to make the purchase. At the door, Morton stopped him. "On the way back," he said, "go to the docks, offer five dollars to any laborer who would be willing to come here and serve as a subject for some harmless experiments."

"May I go, too?" asked Thomas Spear. He was always with Leavitt. Morton nodded and let the two boys go together. He waited anxiously for their return.

They came back an hour later with a bottle of ether but no subject. "There wasn't anybody who was willing!"

Morton called them into the inner office and locked the

door. He laid the five dollars on the table. "Then perhaps one of you?"

Leavitt shook his head and backed away. "I wouldn't dare to take it!"

But Spear, twitching his nose nervously, was more bold. "I will," he said. Eventually, Leavitt, too, was convinced.

Morton gave ether to both boys, one after the other, pouring out the odorous liquid on his handkerchief and allowing them to inhale it as they sat in his operating chair.

They didn't fall asleep as the dog had done, as had been his own experience. Instead, after the first few whiffs, they became excited, leaped up, thrashed their arms, kicked, giggled, became hysterical and could not be held in the chair.

"What a frolic!" cried Thomas Spear, when his head had cleared a little. Leavitt, usually so quiet and so stolid, had suddenly turned talkative. "I felt so gay and so light," he said, and he took an involuntary leap and fell over a chair.

Morton was discouraged. His experiment had failed! But why? What was the reason? He took down a textbook he had read at school, Periera's *Materia Medica* and read there again the passage on ether.

"The vapor of ether is inhaled in spasmodic asthma, chronic catarrh and dyspepsia, whooping cough—and to relieve the effects caused by accidental inhalation of chlorine gas."

Doctor Jackson had said something once about inhaling ether. He had broken a container of chlorine gas while

giving a public lecture, and the gas had caused a profound irritation of the lungs. To counteract the effect of the gas, he had taken ether, and had found the effect soothing.

Soothing? Morton was puzzled. The boys had been exhilarated, almost drunken. To whom could he go, of whom could he ask questions? He was less friendly, far less close to Jackson now, who had grown so irritable and high-handed in his public quarrel with Samuel F. B. Morse.

Besides, Jackson was suspicious. Could he let him stumble on the secret of his experiments? He turned back to the book and read further.

"When the vapor of ether sufficiently diluted with atmospheric air is inhaled it causes irritation of the epiglottis, a sensation of fullness in the head, and if the air be too strongly impregnated with ether, stupefaction follows."

What had he induced in Nig, but stupefaction? Yet his assistants were exhilarated! The book went on to warn that ether was dangerous. The inhalation might lead to death. *"In one case for many days the pulse was so much lower that there were fears for the safety of the patient."*

What if he took ether? What if he died? What then of his experiments? It was not his life now that mattered, but his intense, driving curiosity.

Perhaps it was the ether? Perhaps it was the way in which it was inhaled? He sent one of the boys to the office of Doctor Gay, the chemist. "Ask him if ether were put into an India-rubber bag, whether the bag would melt?"

But the boy came back. Doctor Gay was not at home.

Morton paced the floor. It was August, the office was close and hot, yet there was a continual buzz of patients, the bell on the door kept ringing. Doctor Hayden worked in the front room, the three assistants worked in the back. Morton, usually so methodical, so concerned, paid no attention to anyone, went nervously from room to room. He seemed hardly to hear when he was spoken to.

The next day he stayed in town, puzzling the question. And the following evening, late, when he thought the patients would be gone, he came to the office.

Leavitt was in charge of the front room that night, and Spear in charge of the back. The two boys began to talk together. Spear, who was by nature a mischievous young man, nervous and inquiring and in love with a prank of any kind, saw the demijohn of ether on the shelf. There was a sponge in it.

His eyes twinkled, and he rubbed his nose nervously. "I'll take it if you will," he challenged.

He sat down in the chair, sprinkled his handkerchief and inhaled. He became exhilarated, dropped the handkerchief, and hopped up and down like an excited rabbit.

Leavitt held his hands, tried to calm him. "Inhale through your mouth and you won't get so hilarious," he suggested. But Spear, who was giggling and twisting his shoulders, could not sit still.

"Oh, go out, will you!" Leavitt was aroused. "I'll take it if you'll leave the room. I'm afraid you'll cut up some capers—you're so very tricky!"

Spear backed out, holding his hand to his mouth and tittering. His eyes looked foolish.

"All the way out!" cried Leavitt. He sat down, put the sponge to his mouth, as he had advised Spear to do. But at the first smell, his legs shot up, and he jumped from the chair shouting.

Doctor Morton came in just then, saw the demijohn and took it away from them. Afterward he could not forget the incident. Both times the boys had been exhilarated.

He went to Burnett and got a fresh bottle. He took it home. In his bedroom, the next morning, he looked at it. Theodore Metcalf, the chemist, had said it was dangerous to life, that a man might succumb if he took it. And he remembered the phrase from his medical textbook, "death might follow!"

He lay down on the bed. The house was still. Somewhere outside in the garden he could hear his wife talking to the baby. They were playing with the dog.

"No, Nig . . . careful, not so close to the baby!" The child laughed. He could hear the sound coming up to him clearly.

He put the sponge to his face. Cool and sweet and full of darkness the vapor flowed up to him. He breathed deeply. The voices in the garden grew fainter. They became jeweled specks in a big golden wheel, a wheel of sand, dropping speck by speck. He was in a desert. He was lying in the golden sleepy sand. He was digging his nose into the sand, deep, deep . . . !

His hand had dropped and the sponge had fallen to the

floor. His face dropped from the pillow, and he slept, a sleep sudden and dark like dropping into a well, a sleep without dreams, without remembrance.

Someone was shaking his shoulders, someone was pinching his face. He opened his eyes, saw the ceiling over him, and was awake after a moment of being washed with a wet towel. It was his mother.

"William!" she cried. "Oh, William, what have you done to yourself? I came up and found you moaning so terribly."

He struggled to sit up. The room at last righted itself, and her face, pale and tense, came into focus. He tried to smile. He felt weak and was sweating and his head throbbed.

"You wouldn't make much of a dentist, Mother," he said.

He got up after a moment, went over to the washbasin and poured cold water on his face. "You should hear the noise in our office when a tooth is being pulled."

He looked at his watch. He had been asleep seven or eight minutes. In that length of time a capital operation could be performed! He wanted to question his mother about his reactions, but decided not to alarm her.

He returned to town late in August. The steam cars were full of soot, but without looking to his clothes or changing his linen as was his habit, he went at once to the shop of Mr. Wightman, maker of chemical and medical instruments.

"Show me bags for inhaling nitrous oxide gas." He ex-

amined the black bladders. They were similar to those that Wells had used.

"Would such a bag melt if ether were put into it?"

The instrument maker thought it would and said so.

"Then what about oiled silk?"

"I don't know. Why don't you ask a chemist? There's nobody better than Doctor Jackson!"

Morton frowned. Always Jackson! He bought a black bag and an elaborate glass funnel which was connected to the bag with a stopcock. He took it back to the office. But what if the bag should melt? He knew that ether was combustible, that it might explode by a spark from the lamps.

He went to Jackson and found him in the glass room of his laboratory. He seemed friendly, too cordial, as is the habit sometimes with people who are by nature morose. It was as if something had cracked in him, and this geniality, forced and sudden, was as unpleasant as his usual irritability and sullenness.

"Where have you been?" His smile, unexpected, broke up his face, and the eyes, usually so dark and deep-set, glowed.

"I was working on my summer home in West Needham."

"Prosperous and full of money!" Jackson laughed. "What do you want tonight?" He took it for granted that everyone came for a favor.

"A gas bag," said Morton.

Jackson turned his back. "You'll find one in the house,

on the shelf in the attic." He never pretended politeness.

Morton went up, returned with the bag. He had to come out through the laboratory.

Jackson, who was talking to a student, saw him. He laughed. "Well," he said, "you seem to be all equipped minus the gas."

Morton looked down. "I don't intend to give gas," he answered.

"Then what's the bladder for?"

"A hypnotic suggestion . . . Don't you know the story of the man whose death was brought about through the suggestion that he was bleeding to death, when, in fact, nothing but water was being trickled on his leg?"

"So you're going to suggest to your patient that he doesn't feel pain." Doctor Jackson followed his former student to the door.

"If I were you," he warned, "I wouldn't try such tricks, or people will set you down as a greater humbug than Wells."

"Don't you believe in his inhalations of exhilarating gas?"

"Nitrous oxide? Indeed not!"

"He claims it makes people insensible to pain, that they feel nothing."

Jackson waved his hand. "Nonsense," he said, "it only asphyxiates. We chemists know all those remedies."

"Then what about ether?" Morton's voice was low. "Suppose," he said, "it were given to a patient?"

Jackson glanced at him. "He would be dull and stupefied. You could do what you pleased with him."

"Are there not two kinds of ether?"

"Yes, of course," answered Jackson. "Chloric and sulphuric." And he began to explain the difference. "One is made with alcohol and chloroform, the other with sulphuric acid.

"The latter is the better," he offered, "but it has to be highly rectified . . . without impurities of any kind." And he advised where the purest ether might be purchased.

He looked at Morton shrewdly. "If you intend to give ether, don't use that bag. A flask with a glass tube inserted is much better."

He turned back to the shelf, took down a flask and tube, tinkered with them, and handed them to Morton, who said, trying to take the flask without eagerness, "I don't know that I'll use it."

But he hurried at once to the chemist shop of Mr. Joseph Burnett, and asked for pure, highly rectified ether.

When he got back to the office he saw with relief that there were no patients about. It was very hot, and the two boys, Spear and Leavitt, were drowsily cleaning some instruments.

He went by them without speaking, and eagerly locked himself in his own inner office. "Tell no one to call me," he directed through the closed door.

He sat down in the chair by his desk, took out his watch, put it on the table. It was suffocatingly hot in the

closed room. Sweat poured from him, yet, because of his excitement, he felt cold.

He took out a handkerchief. He tipped the bottle of ether he had brought with him, and put the handkerchief, saturated with ether, to his nose.



Took out a handkerchief and saturated it.

Almost at once he had a sensation of ink spreading before his eyelids. Slowly, slowly, the black flood poured out. It submerged him, and he went down, his body reeling, down, down, into fathomless depths, and a rushing sound passed his ears as he fell.

At this moment, his hand with the handkerchief dropped from his mouth. He wanted to lift it, and couldn't. He struggled to consciousness, but, as in a horrible nightmare, he couldn't awake.

He wanted to scream, cry out for help, but his mouth could not move. His eyelids were weighted. His body seemed turned to stone. And so immobile, transfixed, he struggled with all his might, and the terrible thought came to him, I am dying!

But slowly in the corner of one of his fingers there was a tingling, a stirring of blood. He tried to touch this finger with his thumb. He couldn't. Then gradually his fingers drew together; they touched each other. There was no sensation. It was like two pieces of wood touching.

He waited. The tingling spread. He was able to raise his hand. His fingers sought the flesh of his thigh. He held the flesh and squeezed it. It was like squeezing clay, some alien substance. He felt nothing.

In spite of his terror he felt triumphant.

Swiftly the feeling of life returned once more to his limbs, his fingertips, to all parts of his body. Slowly he lifted his head. He looked at the watch.

He had been unconscious just eight minutes.

He swayed at the door. He stumbled out into the outer room. Hayden, Spear and Leavitt were there. They gazed at him.

"I've done it," he cried. "I've done it!"

CHAPTER SIX

IT IS PAST CLOSING TIME. THE OTHER ROOMS OF THE office are dark. The assistants are gone. No patients are expected.

"Of what use is it to wait?" asks Doctor Hayden.

"Someone will come," says Morton.

It is the evening of September 30, 1846, and all day his assistants have been running to the docks, to the taverns, to the jail.

They have been searching for a vagrant, for some laborer who would be willing to come to the office on Tremont Row, and take Morton's vapor.

No one comes. No one is willing. The boys are discouraged. "You can't hire a man to risk his life," they say.

Morton turns to the boys, to Spear with the big eyes and the nervously twitching nose, to the more stolid Leavitt with his square chin and freckles.

"You, Leavitt; you, Spear. Will you try it? I tell you the vapor is harmless!"

He pleads with them. But before his intensity they are frightened.

And Doctor Hayden, too, refuses.

"Then someone will come. Someone must come who is willing!" He sits down to wait. Doctor Hayden waits, too.

"But who will come out on such a night?" says Doctor Hayden, and he turns from the window where he has been looking out at the rain.

Morton, who is sitting by the lamp with his head lowered, his hands pressed together, does not answer.

It is eight o'clock, half past eight, and now the church tower clock in the distance strikes the quarter of the hour.

Morton clasps his hands and unclasps them. He strikes one hand in the other. "A man with a toothache . . . that's what I need . . . a man that's desperate with pain."

Hayden mopes in the chair. He is thinking of his dinner which is getting cold at home. Morton, growing every moment more strained, more harrowed, presses his hands together.

"Lord, send me a subject!"

Since that moment when he stood swaying in the doorway, and cried out, "I have it!" he thought and prayed for only one thing, the chance to try his experiment on another human being.

"No, it can't wait until tomorrow," he says to Hayden. "I can't go home!"

And as they argue, the bell tinkles.

Both dentists start up. There are steps on the stairs, and in the doorway stands a patient, a stout gentleman wrapped in a wet cloak.

His cheek is swollen. "I am so desperate with the toothache," he moans, "that I'll do anything, anything to get rid of the pain."

Morton looks at his assistant, who gets suddenly pale. Hayden had promised he would help.

The stout gentleman gets into the chair. He opens his mouth with difficulty. Morton makes the examination. The tooth must come out.

"And I have something here," he says, "which you breathe and you will feel no pain."

His voice does not shake.

The sick man opens his eyes. "Anything," he moans, "anything to stop the pain."

Morton takes out a clean handkerchief from his pocket. He pours out the ether drop by drop, saturates the handkerchief, and holds it to the sick man's face.

"Breathe deep," he whispers. "Don't struggle."

One minute passes . . . two minutes . . . and as Doctor Hayden watches, holding high the lamp, Morton takes the handkerchief away. The head of the sick man sags, his eyes are closed.

Morton bends over him. He calls the patient by name. "Eben Frost," he whispers. "Eben Frost!"

There is no answer.

In Hayden's hand the lamp quivers, the shadows waver.

Morton takes up the forceps. He locates the tooth. "Closer, the lamp!" The light falls on the face of the sleeping man, from whose features fright and pain have vanished. It falls on the agile, quick hands of the dentist. The rest of the room is dark.

Morton braces himself. There is a wrench, but no outcry. The sick man's head sags. The tooth is out!

Morton holds it up in the forceps, and looks at it dazedly.

"Look, it's out!"

But Eben Frost is still sleeping. With eyes closed he lies still, and through his mouth, half open, he seems scarcely to breathe.

"Quick, water!"

Morton shakes him. He splashes water desperately. He calls to him.

What if he should die?

But the sick man's eyes finally open. He looks round the room. He sees the tooth still bloody in the forceps.

He starts up. "Glory Hallelujah!" he murmurs fervently. And he puts his handkerchief to his lips and tries to get out of the chair.

The window is opened. Cool air and the rain sweep in. He comes to himself. "A miracle!" he cries.

When Mr. Frost at last is gone, gone out into the rain with one tooth less and his head full of wonder, Doctor Hayden turns to Morton.

"If this doesn't bring money, then nothing can." And with this practical remark he goes home to his dinner.

But Morton doesn't eat; he doesn't go home.

How is he to find subjects for more experiments? How is he to convince people that ether is safe?

He runs to Doctor Jackson. He asks for a recommendation from the chemist, a statement, a certificate that ether is safe, that the textbooks are wrong.

"Are you mad?" cries Jackson.

In the darkened doorway of his laboratory he almost shouts.

"What of my reputation? My standing? Do you think that I am as reckless as you are?"

He turns Morton out. But Morton is too excited; he cannot feel hurt or disturbed.

He gets Hayden out again. Together they go to the newspapers. The next morning, in the *Boston Daily Journal* of October 1, 1846, there is a cautious news comment on a local happening of interest.

Last evening, as we were informed by a gentleman who witnessed the operation, an ulcerated tooth was extracted from the mouth of an individual without giving him the slightest pain. He was put into a kind of sleep by inhaling a preparation the effects of which lasted about three-fourths of a minute. Long enough to extract a tooth!

Did the announcement stir excitement in Boston? Did people in general see the import of it? No! Like all important discoveries it might have gone for a time unnoticed. But as it happened, on the morning of October 1, the elegant young surgeon, Dr. Henry J. Bigelow, son of Professor Bigelow of Harvard, happened to open the paper. It had come to the right person. His restless, fervent interest seized at once on the item.

What was it, this substance? How did it work? Pain stopped? Was it possible? The age-old problem of surgery solved? And by whom? A dentist! A miracle wrought here

in Boston! He rang for the maid, called at once for his carriage. Impetuosity was part of his nature.

He was handsome, with his little French beard, and fine features, and very fashionable and accomplished, combining brilliance with an actor's love for good appearance.

At fifteen he had entered Harvard. Under his father, Dr. Jacob Bigelow, professor of Materia Medica, he had begun his study of medicine. In Europe he studied surgery with the famous Louis, in Paris. There, too, he had acquired a taste for fine, fitted French clothes, and the lavender gloves, after the Emperor, which were such a rarity in staid Boston. And he had brought home with him an imported cabriolet in which he drove out on his calls, behind a handsome, black, spanking horse, harnessed with red leather, elegantly monogrammed.

Yet were these the preoccupations of a vain, or an empty mind? Indeed not! Already the son of Dr. Jacob Bigelow was recognized as one of Boston's most brilliant young surgeons. At twenty-six, his *Manual of Orthopedic Surgery* had won the Boyleston Prize. And two years later he had been appointed visiting surgeon to the Massachusetts General Hospital, an unusual honor for a young man.

But what a physician! What skill, what sureness lay in this young man of fine lineage and exquisite education!

He was constantly trying out new devices and inventing new instruments. He had a microscope in his study, and he examined and pored over the fragments of every tumor and every growth that he removed. Older doctors

of the rough, lopping-off school of surgery laughed at this practice.

But young Bigelow, who had studied surgical pathology under the great Sir James Paget in London, believed firmly with his teacher that hints of disease could lie in these fragments.

"Bigelow's fragmentary world," some doctors called it. But they couldn't laugh at his sure, defiant skill as a surgeon, at his brilliant inquiries, his challenging medical papers.

So here he was, just the person to read Morton's awkward, circumspect announcement. An hour later, Doctor Bigelow's handsome carriage with the folded top stood at Number 19 Tremont Row, and the young surgeon, in a dashing cape, lined with silk that rustled, smooth-fitted gloves of a hue worn only by women, and a beaver more glossy and taller than any in Boston, was climbing the stairs.

He presented his card. "Doctor Bigelow calling on Dr. William Thomas Green Morton." His voice was low and gentle with an authority that could be expressed in a whisper.

Doctor Bigelow! Young Leavitt was goggle-eyed. Doctor Bigelow! Doctor Hayden was deferential. "Here, this way . . . to the inner office!"

But was Morton, the commercial dentist, the unknown medical student, overwhelmed, or surprised? The impact of the discovery in the last twenty-four hours had transformed him. He could not think of himself . . . only of

the discovery . . . of having it tested, approved, understood!

A patient was sitting in the chair, a pale boy of sixteen, very frightened. He was about, Doctor Morton explained,



"Dr. Bigelow calling."

to have a tooth pulled under the new vapor. Would Doctor Bigelow care to watch?

The latter nodded his head. Elegance dropped away from him. Under the impact of a new discovery, a new device, his curiosity was as simple and as ardent as a schoolboy's.

He took off his gloves, threw aside his cape, and with a look to Doctor Morton for permission, took the boy's pulse, noted his natural respiration.

Then the vapor was given from a handkerchief. The

patient moaned once and fell asleep. Again Doctor Bigelow noted with swift, sure fingers on the boy's pulse, the rate of his heartbeat, and the rise and fall of his breath.

The tooth was taken, a deep, well-rooted tooth, partly broken. For a moment the patient's face was puckered, but he made no outcry, did not open his eyes, seemed to have suffered no pain.

"Extraordinary!" The surgeon drew in his breath. "This discovery must be tested by surgeons." He urged Doctor Morton to go at once to the senior surgeon of the Massachusetts General Hospital.

"To Dr. John Collins Warren?"

Morton remembered the failure of Doctor Wells. Would Warren believe him when he came a second time with a new discovery, his own?

The next day, at one o'clock, he was in the consulting room of Doctor Warren, at Number 2 Park Place.

The old surgeon, grave and bowed, listened to him while a roomful of patients waited for him outside. His son, Dr. J. Mason Warren, had joined him in practice, but it was inconceivable that any two human beings should do in one day as much as was demanded of them. Operations, consultations, lectures, affairs of the hospital, and the public affairs of the city! Yet the elder Warren was never hurried, never impatient; never by the slightest variation of voice or manner did he show the weight of his work, of his many responsibilities.

He listened to Doctor Morton quietly, pressing his fingers together as was his habit, his face impassive.

Morton told the story simply from the beginning. He told of the drops he had put in Miss Parrot's tooth, of his experiments with various insects, the goldfish, his father's black spaniel, Nig. He detailed his own sensations each time he had taken the vapor. And finally, with a feeling of triumph, he recounted the story of Eben Frost, the successful extraction, and as proof, he showed a sworn statement given to him by that gentleman. He mentioned Doctor Bigelow's visit, and the latter's observations. And then he stopped, afraid to make the request he had come to make.

"What do you want of me?" The famous surgeon spoke quietly.

Morton moistened his lips. "A chance to give the ether in a surgical case!"

He realized the enormity of his request and waited.

Doctor Warren questioned him. "Is it safe to the patient? Are you sure it will be effectual?" He passed a thoughtful hand over his long, clean-shaven face, and seemed to talk for a moment to himself. "I have always been anxious to find something of the kind proposed!"

Morton felt elated. He had won! "When?" he asked, impetuously.

"At the next surgical case which I think is suitable, I will notify you, Doctor Morton." He held out his hand.

The name of the vapor had not been offered by the dentist, and the surgeon had not asked for it, respecting the other's right to keep his discovery a secret.

During the next ten days, Morton searched for subjects,

and worked in a frenzy of anxiety to perfect a new inhaler. The conical glass tube which Mr. Wightman, the instrument maker, had given him, did not seem to be effective.

One day a woman came, was given the inhalations through the glass tube, into which a small, narrow sponge had been forced, but she failed to fall asleep, and kept on talking nervously, incoherently.

Morton was troubled. Could it be possible that a patient could remain conscious? Yet was there a likelihood that the nerves of sensation were numbed?

He persuaded her to have the tooth drawn, even though she was not asleep. She agreed, mumbling all the while, hardly understanding what he said to her.

He took the tooth. She did not wince. Not a muscle moved in her face. The rate of her pulse had not altered. She had not felt anything, and yet all the time she was seemingly awake!

Another woman came, was given ether, became excited, struggled, screamed in the chair, had two teeth drawn, and yet insisted afterward that all the time she had been unconscious!

Not a good performance to put on before doctors. Morton thought of his coming test before Doctor Warren. What if the patient cried out? What if the ether were not effective?

The problem must be with the inhaler. He had brought his wife and the baby into town. They were staying at the home of Dr. A. A. Gould, a surgeon at the Massa-

chusetts General Hospital. Doctor Gould, stocky, bald, with knobby features, and a heavy substantial look, showed a keen interest in Morton's experiments.

Morton had said to him once, "I will have a way yet to perform operations without pain!"

And Doctor Gould, smiling skeptically, answered, "Then that will be more than human wisdom has yet done!"

But now he was convinced, was almost as eager as Morton, to see the new vapor tested. He suggested an antidote if the patient should become too weak. And it was his notion, for he liked to tinker with surgical devices, that an inhaler with a valve might be effective. "In that case you could stop the flow of the fumes at will!"

The instrument maker, Mr. Wightman, became impatient. Like most mechanics he lacked imagination. "How can I make it if you don't know what you want?"

Morton went to a new instrument maker, Mr. Chamberlain. He was a fine craftsman, but slow and inclined to be irritated if he was hurried. The dentist hung over him as he worked.

"I can't do it this way!"

"It must be done!" said Morton.

One device had been made, tested, abandoned. Another was started.

"The next case that is suitable . . ." Warren had promised.

On October 13, at the Massachusetts General Hospital, a patient was brought into the operating room, a young

man, a printer, whose name was Gilbert Abbott. He had a tumor just below the jaw.

Doctor Warren, the surgeon, came into the operating room. The students were watching. The instrument case was opened. And then suddenly as if remembering something the surgeon stopped. He spoke to the patient.

"Would you like to postpone the operation and have it without pain?"

The patient looked at the surgeon with startled eyes. "Without pain . . . ?"

"Yes, by a new means if you are willing to try it."

The surgeon explained the nature of the remedy . . . a new discovery . . . there might be some risk involved. Was the patient still willing?

"Anything! Anything!" murmured the sick man. He had the look of someone rescued from death.

The students who had come to witness the operation were dismissed, and the porters carried the patient out again.

The next afternoon, Doctor Morton received a note. It bore the embossed, official-looking device of the Massachusetts General Hospital.

He held the envelope in his hand, his heart beating wildly. Maybe a refusal after all! He tore open the seal and read a communication from Dr. C. F. Heywood, house surgeon.

"Dear Sir: I write at the request of Dr. John Collins Warren, to invite you to be present Friday morning, October 16, at ten o'clock at the hospital to administer

to a patient, who is then to be operated upon, the preparation you have invented to diminish the sensibility to pain."

Fright and triumph fought in his heart. A chance to try ether at last!

But what if the patient should leap into the air screaming? What if he died, as Jackson warned? After all, Doctor Warren did not know it was ether he was giving.

He ran at once to the instrument maker's. "Do you hear me, the day after tomorrow. The operation is set!" Back to Doctor Gould, back to the instrument maker's. The valve was not right, the valve would never be ready in time!

All day, all night, all of the next day, and all of the next night, he hung over the flustered, harried instrument maker. Model after model, valve after valve. A hundred times he lived through despair and found courage again.

Dawn at last, a cold rainy dawn on the morning of October 16. The valve is not ready. "Hurry! Oh, hurry!" Morton runs to his home to shave, to change his linen, to get ready for his appearance in the well of the operating room of the Massachusetts General Hospital, where the season before he sat as a student, in one of the tiers.

"Oh, how you look!" His wife stumbles around in the half dark of the late October morning, getting his things together: the long blue coat with the brass buttons, the wide black stock which he liked to wind about his neck, tucking the ends into his vest.

He is careful of his appearance even in this moment

of anxiety. Like Doctor Bigelow he also dresses in a manner that is fashionable, slightly theatrical. But it suits the deep pallor of his face, the skin almost transparent at the temples; the black silken flow of the mustaches; the long, dark hair parted on the side, falling almost shoulder length.

His wife folds his cloak over his arm, parts from him at the doorway, talking in whispers.

"I will wait with the greatest anxiety," she says. "But when will you eat, William . . . when have you eaten last?"

He does not seem to hear, does not seem to answer. Eat? Had he eaten? Or slept? And when? He hurries back to the instrument maker's.

It is light now. Wagons are moving in the streets, over the damp pavement. The clouds are lifting. The sun will come out after all. At the Massachusetts General Hospital they are waking the patient for the operation. In their attic rooms on Cambridge Street, on Joy Street, and in the little steep streets running up to the Common, the sleepy medical students are climbing into their clothes. An operation today . . . a new experiment . . . Doctor Warren himself is going to try it . . . no, no one important, just a student from last year's class, his name is Morton, a dentist . . . maybe he'll fail . . . maybe it will be good sport . . . they remember the laughter in the lecture room when Doctor Wells failed. And it was this same Morton, a reckless fellow, who recommended him!

The instrument maker, his stubborn profile set, is still

at work. He is pale from lack of sleep. His fingers move more slowly than ever.

"Hurry! In God's name, hurry!" Morton, always gentle, always calm, cannot contain himself. He paces the floor with his cloak on his arm, brushes the silken beaver, tries to keep his fingers from his watch, from those precious racing moments as important as life to him.

It is eight o'clock, nine, and a half after the hour! He sends a boy to summon Eben Frost, his first patient. The stout gentleman is willing to come with him as a witness, to assure the patient on the operating table, in case his courage should fail.

He comes to the instrument maker's in his best black coat; his side whiskers glow from much brushing; his color is high. He is full of importance.

"If that fellow's tumor comes out like my tooth did, he'll say Glory Hallelujah and thank the Lord just as I did!"

The operation is set for ten o'clock. At that moment the knife will fall. Doctor Warren is not a man to be kept waiting.

It is ten minutes to ten! The instrument maker is still fumbling.

Morton is beside himself. "Give it to me!" He sweeps the instrument under his cloak. In his pocket is the bottle of ether. He has flavored it with oil of oranges. No one shall know, no one shall yet recognize his discovery!

There's not a coach on the street. Better to walk. If a cab comes they can take it. He rushes down Cambridge

Street, his head bent, his cape billowing. Mr. Frost, breathing hard, is behind him. He puffs and gasps and complains that he cannot walk so fast. It's not suitable. But he hurries.

Down Fruit Street they go, to Blossom. They pass a clock. It is after ten. Along the ugly wooden fence of the hospital . . . through the gate, across the grounds, up the stone steps, between the cold Roman columns through which so many have passed in despair. They are in the hall. They are mounting the stone steps, flight after flight. How the heart pounds and races. One flight, another, another, are the steps today endless? And on the fourth floor, at last, they hurry down the long hall, to the operating room.

No voices. Silence there. Have they started? Have they waited?

Inside the operating room, there is silence. The spectators' seats are packed, head on head. Medical students are there, skeptical doctors, and a few visitors who have managed by importunity or favor to get in. One of these visitors is a teacher. He had taught a certain dark-haired boy his first love of chemistry and experiments, at Northfield Academy, a dozen years before. His name is Doctor Wellington.

Can it be? His student? The boy who wandered over the Berkshire hills with him collecting mineral specimens, asking eager questions about the mysterious world of science which he was just then beginning to discover.

Doctor Wellington, of all the visitors, waits most anxiously.

It is ten o'clock, the hour of the operation. "Where is Doctor Morton?" Heads turn, a whisper runs along the galleries.

The patient is brought in. He is clad in light trousers and an open shirt. Hesitantly, very frightened, he seats himself in the operating chair: a young man, twenty-nine, with a bony, boxlike face, long black sideburns. At the side of his face, just under the left jaw, is a doughlike mass, a tumor of indurated veins, present since birth.

He leans his head back. The dressers step forward. A strap is fastened around his shoulders, another across his thighs. To the bottom rungs of the chair the feet are fastened, and his hands are firmly bound in his lap. A towel is placed around his shoulders.

The surgeons enter. The students stand. Dr. John Collins Warren, the senior surgeon, is first. He nods briefly, speaks a word to the patient, and begins to examine his instruments. Behind him comes Dr. George Hayward, tall, blond, with a high and commanding forehead, perfect features, a strong nose, firm lips, the expression cold and fixed. He is to take charge of the surgical service in November. Now he is second in authority, second only to Warren.

The others come in, group themselves around the operating chair tipped back slightly so that the patient half reclines. There are seven surgeons in all. The handsome junior surgeon, Dr. Henry J. Bigelow, is there. His long

surgeon's fingers touch the little French beard. He looks anxiously toward the door, to the white-curtained partition just behind him, through which Morton should enter.

Dr. A. A. Gould stands near him. His face, over a scraggly chin beard, is bleak. He glances at the clock, a cautious look, and then at the door. Will his friend fail him? It is five minutes after ten. There are smiles of skepticism on some faces. Gilbert Abbott, under the straps, is pale and anxious. He turns his face to the clock, too.

Near Doctor Gould, and at the left of the patient, stands the son of the senior surgeon, Dr. J. Mason Warren, tall, fragile, and gentle. He has heard from his father about Morton's experiments. He sighs. What a great boon it would be to mankind to spare pain.

Behind him is a member of the medical faculty of Harvard, Dr. Samuel Parkman. Last year, William Thomas Green Morton was his student. And at his side stands the house surgeon of the day, Dr. S. D. Townsend, once a naval doctor, jolly and twinkling by reputation, but today he is stern, his head bent forward from a bulky body, his hands quiet.

The big hand of the clock on the wall moves forward. What cares time for the events and hopes of men? Ten after ten, twelve minutes after the hour, fourteen! There is a whisper in the gallery. He's not coming! He's afraid!

Doctor Warren is cold, his face tense, his manner of perfect self-command keeps the galleries from bursting out into ridiculing comment, open laughter!

A fine show! A fine demonstration! Morton is afraid.

Morton will not show himself. Heads nod. Eyes wink. Hands make derisive gestures. There is something in the nature of men that makes them like to see failure, like to see someone brought down. Who after all was this Morton, a mere dentist, to make such promises, to bring them together, to cause such embarrassment and unpleasantness? And to whom? To the distinguished staff of one of America's greatest hospitals!

But there are some men who have faith. The elegant young Doctor Bigelow leans over and whispers to Doctor Gould, whose look of anxiety has deepened, "He will come!"

It is ten-fifteen! For fifteen minutes they have been waiting, the surgeon's staff and the patient.

"Gentlemen!" Warren is speaking. The word falls like a rock into water. Every man's heart feels the impact.

"Gentlemen! As Doctor Morton has not arrived, I presume he is otherwise engaged!"

A surge of laughter, bitter, derisive, rises from the gallery. Only the patient does not laugh. Doctor Bigelow bites his lips. Doctor Gould's mouth, held firmly, sinks in an arc of disappointment. Dr. George Hayward gives an involuntary, one-sided smile.

In the first row of spectators, Doctor Wellington sinks down in his chair. You threw your life into your students, you gave them the vital spark from yourself . . . and they failed you.

Doctor Warren sits down to the patient; he takes up the knife. The young printer, half-reclining under his

straps, turns his head, closes his eyes. The painted sarcophagus, which immovably overlooks all operations, is there behind him, and in the shadow is a grinning skeleton, left hanging near the wall from the last lecture.

For an instant the room is silent, as silent as that aged mummy in its painted cage, as silent as the skeleton, dried object of all human fame, which looks down.

For one instant the knife is poised . . . and then there is a sound of footsteps hurrying along the hall. All heads turn . . . only the patient will not look.

Someone has come in. The door in the muslin screen opens. Morton enters. His dress is a little too dramatic, somewhat theatrical, but it suits him.

He bows to the surgeons, to the patient. Not one glance to the galleries. He speaks at once to the sick man in the chair, gently, softly, reassuring him, calling Eben Frost forward to speak to Abbott.

"It can't hurt you," says Frost. He enjoys his dramatic position. "I took it myself!" He would like to show the spot in his jaw from which the historic tooth was pulled. But he feels he has lingered too long in the floodlight. Overcome suddenly with humility, he steps back.

Abbott listens. He nods his head. Has he understood in his fear what was said? He would believe anything, anything but the knife that for one terrible silent instant hung over him. "Anything!" he murmurs, "anything!"

The semicircle of surgeons parts. Morton takes his place at the head of the operating chair. The spectators in the galleries with one movement bend forward.

He takes out the glass apparatus, saturates the sponge. The odor, sickish, sweet, masked with the smell of oil of oranges, pervades the operating room.

He bends over the patient. He puts the glass tube in his mouth, "Breathe through your mouth," he says. He holds the nostrils fast. The sick man inhales, chokes, inhales again.

"Again! Breathe again!" Morton speaks softly, bends low over him. And the sick man obeys. The doctors crowd forward.

At first the patient seems excited. He murmurs incoherently, strange groaning noises, almost animal-like, without sense, and he twists under the thongs.

"See!" In the spectators' seats the students are incredulous. "You will see. He won't sleep!"

But suddenly the twisting body is still, only the sharp intake, the half-sobbing breath is heard in the stillness of the room.

"Your patient is ready, sir!" says Doctor Morton.

The tumor, just at the edge of the left jaw, is made up of a knot of enlarged veins. As Doctor Warren makes the first incision, the students wait. But there is no cry. The patient sleeps.

A cut, two or three inches long, is made. The fascia in delicate layers is divided. The growth is exposed.

So far, no sound, no change of expression. But now, as the operation proceeds, as the bared veins are insulated, the sick man, whose eyes are closed still, begins to move

his arms and legs under the straps. His lips, too, are mumbling.

"He can't be unconscious!" someone whispers. There is a twisting and turning in the galleries. One man whispers to another . . . and as usual when men are assembled to witness a miracle, they hope with their power of human credulity that it will fail.

At length the operation is over. The bandages are applied, deftly, quickly; a pass around the head, another, another! The part of the patient's face which is exposed is washed with a sponge. He opens his eyes. At first he is dazed, cannot believe the operation is over. Then in a whisper, his face muffled by bandages, he answers questions.

No, he felt nothing. "Only a kind of hoeing here!" And he points to the bandages.

Doctor Warren turns to the spectators. "Gentlemen, this is no humbug!"

"I have seen something today which will go around the world!" says Doctor Bigelow. He grasps Morton's hand.

Some of the students and physicians crowd down from the galleries. They come forward to speak to Doctor Morton. Miracles make people awkward, ashamed of their feelings. Some are skeptical still.

They whisper together, crowding out through the door.

What was it? What had he given? How could a surgeon

expose the life of a patient without knowing what was used?

The sick man had mumbled. Everyone heard him. What matter if he said that he felt no pain. Could one say, could one really believe that the operation was a success?

Groups stand in the hall, talking, discussing, as Morton goes out with Doctor Gould.

At home, in the rooms that they had taken in Doctor Gould's house, Elizabeth Morton waits.

The operation had been at ten o'clock. What if the patient had died?

It is twelve o'clock . . . one o'clock . . . two o'clock . . . three! Can it be he has failed? In her room Mrs. Morton waits.

At four o'clock, her husband opens the door. His face is so sad, so worn, that she is afraid to speak to him, afraid to ask him.

He takes her in his arms. "I've succeeded."

CHAPTER SEVEN

A MIRACLE? HUMBUG I CALL IT!" CRIED DOCTOR JACKSON, and across the lamp-lit table in his laboratory, he faced the young chemist, Mr. Theodore Metcalf, who had just brought him the news of Morton's experiment.

"Morton is reckless," he cried. "He doesn't know what he's doing. He'll kill somebody yet!"

Mr. Metcalf seemed puzzled. "Wasn't he once a student of yours?" he asked.

"What of that?" Jackson turned. His hand whipped out dangerously over the glass tubes and flasks on the table.

"I won't have my name or my reputation linked in any way to his."

And with the greatest bitterness he went on to talk of his former student whom he called rash, impetuous, ill-informed in the methods of science.

"A commercial dentist," he exclaimed, "a plugger of teeth! Who is he to set himself up as a discoverer?"

He confided to Metcalf that he knew the remedy that Morton was using. "It's dangerous, fatal. The surgeons are fools to encourage him."

And again he predicted that Morton would kill someone, that he would be disgraced and discredited.

“Wait! You will see.”

Yet the very next day, at the Massachusetts General Hospital, Morton repeated his experiment. He administered the sleeping vapor a second time. The patient was a woman, and Dr. George Hayward, removing a tumor from her shoulder, had to admit that this time there had been no sound from the patient, no evidence of pain.

“Tell me now what you think of this discovery!”

To Doctor Jackson’s laboratory had come another visitor, Mr. Caleb Eddy.

A former alderman, a trustee of the hospital, a public-spirited citizen interested in what might be a boon to mankind, he put the question directly to Doctor Jackson.

The chemist hesitated, pursing his lips which in the last few days had grown thinner, a mere purplish line in a face gone grayish.

“I don’t call it a discovery,” he answered.

“What do you mean?”

“I always knew of this remedy. Morton was my student. I took him into my confidence.”

The alderman gave him a sideward glance.

“Did you know that this vapor could make a person sleep?” he asked.

“Did you know that a person sleeping in this manner could be cut with a knife and would not feel it?”

Jackson evaded. “No!” he burst out, “and neither did Morton. He stole my ideas!”

He no longer said that the vapor was fatal. Morton had proved it was not.

In his office on Tremont Row, the dentist was giving free dental service to anyone who would take the vapor. There were many volunteers.

Jackson no longer said, "Morton will kill someone." But to all of his friends, to the businessmen who came to visit him professionally he now pointed out that everything which Morton knew he had learned at Somerset Street, "in this room," he would say, shaking his finger, "at my hands."

When a lawyer from New York, Mr. Edward Warren, came to call on him, the talk turned, of course, to the new discovery.

"Morton came to me continually for advice," said the chemist.

"If I don't get my share," he threatened, "I will write to Europe. I will blow the whole thing up."

For years he had been making claims against Mr. Samuel F. B. Morse, inventor of the electric telegraph. These claims stopped, for he now had a new interest.

One morning he went to call on Doctor Morton. It was early and he found him in the office alone.

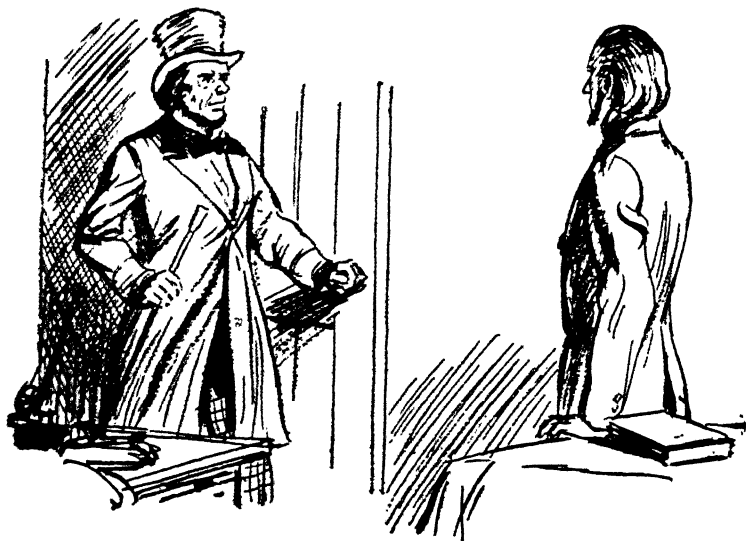
"I have just looked in," said Doctor Jackson, "to see how you are."

Morton inclined his head but did not answer. He had heard of Jackson's bitterness, and was amazed that he had come.

They sat down awkwardly on the bench in the waiting room.

It was the chemist who began. "I understand," he said, "that you are doing well with ether."

Morton was silent, looking down at the floor. How could he face this man who hated him, who had hoped he would fail?



"I have just looked in to see how you are."

Doctor Jackson went on speaking, smoothly, coolly, as if nothing had happened between them.

"Is it true," he said pleasantly, "that you are intending to take out a patent on the discovery?"

Morton nodded and felt a sense of resentment at being questioned.

"I expect to do so," he answered.

Jackson leaned toward him. "Then no doubt," he suggested, "you expect to make a great deal of money."

Morton got up. "Why not?" he exclaimed. "This discovery has caused me both anxiety and expense."

The chemist rose, too. "Then what about my professional services?" he whipped out. "I gave you advice. I expect to be paid for it."

Morton looked at him. "How much do you want?"

"Five hundred dollars."

"But I don't have it!"

The statement was true. For six months he had neglected his business. He had been treating patients at no charge, in return for their taking the new vapor.

"But such business does not put any money in the pot." This was the complaint of his assistant, Doctor Hayden, who finally resigned.

Morton put his brother-in-law, Dr. Francis Whitman, in charge of the office.

The experiments continued. Dr. Henry J. Bigelow came to watch, standing in his elegant cloak against the wall of the little inner room, filled always with the sickish sweet smell of ether, and the odor of unwashed patients.

"This is an event of the greatest importance," said the young surgeon.

He bent over each patient that was put to sleep, noting the pulse beat, the respiration, the flexion of the muscles, the eye reaction.

"I will write a medical paper to announce this discovery to the world."

And Morton, learning from him the more exact, the

more objective methods of science, agreed that there must be hundreds of cases.

He forgot about his ledgers, and his unpaid bills.

Facing Jackson now, he was staggered. Five hundred dollars! Where could he get it?

He was about to file a patent for the discovery. He had been advised by his attorney that the right to use the vapor could be sold in all the states of the Union.

He made a suggestion to Jackson. "If ten per cent of what I make amounts to five hundred dollars," he said, "then you shall have it."

The matter seemed settled.

Yet going to his attorney a few days later to draw the paper, he was astounded to hear that Jackson had been there, and had persuaded the lawyer that his name must appear on the patent papers, too.

"What for?" cried the dentist. "By what right?"

"It is not a matter of right," soothed the lawyer. "It will be far more expedient."

And very diplomatically he began to point out the value of Jackson's name, his great prestige as a scientist.

"I made the discovery alone," cried Morton, "and I will win the patent in my own name."

"In that case," said the lawyer, "I will have to inform you that Doctor Jackson won't let you."

"Are you acting for him, or for me?"

"Doctor Jackson happens to be my friend, it is true, but I'm acting in your interest."

Jackson, he went on, could undertake an action to impeach the patent.

"But could he win?"

"That's not the question," said the lawyer. "It is so much better to have his good will." And he extolled again the chemist's great name and prestige.

Wearily Morton listened. "He did nothing to help me. I took the risk."

"In such matters a person must be practical," said the lawyer. "You want the patent. Jackson's name will help you to get it. Alone, unknown, you might fail!"

And Morton allowed himself to be persuaded. His affairs were disorganized. He owed money everywhere. It was important that he get the patent.

By the sale of rights for the use of the vapor, he would very soon have some recompense from his discovery. This the lawyer promised him.

He sat down to sign the papers which would bear Jackson's signature also. That evening he wrote to an old friend, Dr. Horace Wells, of Hartford, asking his help in the new business.

"Dear Wells": he wrote. "I have discovered a preparation by inhaling which a person is thrown into a sound sleep."

"The time in which the person remains asleep can be regulated at pleasure. While in this sleep, the severest surgical and dental operations may be performed, the patient not experiencing the slightest pain.

"My object in writing you is to know if you would not

like to visit New York and dispose of the rights."

The answer from Doctor Wells came immediately. He would come at once. "Do nothing until then," he said, "lest by improper methods your purpose should be defeated."

Two days later he was in Morton's office. His enthusiasm was somewhat strained.

"So you, too, have made a discovery!"

Morton glanced at him. "Let me show you."

But first Wells had to ask questions. His manner seemed somewhat prying, almost suspicious.

"What is it?" he asked. "Is it perhaps my old discovery?"

Morton shook his head. "Nothing like it," and he pretended that he had not noted the intent of this remark.

Suddenly he felt constrained with his friend, as he had with Jackson. What was it? Why could they not wish him well?

Remembering how he had run to the professors for Wells, he felt bitter.

One day his mother, coming in to see him, had remarked, "This discovery has brought you only trouble."

He sighed and, turning now to Wells, said, "I will show you how it works."

But his enthusiasm, his desire to share the pleasure of the discovery was gone. This man who waited, tall, handsome and flushed, tense and unfriendly in every muscle, could not be the good friend he once had known.

His mother was right. The discovery had brought him only trouble.

He called in the first patient whom he had waiting, a boy of fourteen. While Doctor Wells watched silently, he poured out the colorless liquid on the sponge, and put the inhaler to the boy's mouth.

He fell asleep at once, throwing his head back and breathing deeply.

Two more patients were called in subsequently and three extractions in all were performed that afternoon, Doctor Wells standing by and watching intently.

When the patients were gone, Morton turned to him. "What do you think?"

Wells shook his head. "Dangerous," was his opinion given coldly without looking at his friend. "Of no practical utility. Does not warrant the expense, in my opinion."

And at the door he added, "I would abandon such experiments."

This last stroke, this seeming concern of a friendship which Morton felt did not really exist any more, hurt him more than the bluntness.

"What is it? Why do they hate me?" he asked his wife. "What have I done to them?"

Every day Jackson made new claims, new demands. He went to visit Dr. John Collins Warren and, facing the senior surgeon of the Massachusetts General Hospital, declared, "I am the discoverer, and not Morton."

"Indeed!" replied the surgeon, rising from his chair and facing the chemist across the open glow of the lamp in his study.

"In that case, Doctor Jackson, I suppose it is your desire to make some surgical experiments?"

Jackson drew his breath. "I . . . it was not . . ."

Doctor Warren ignored his discomfiture. "I am operating tomorrow morning at eleven, and will be pleased to have you administer the vapor to my patient. Undoubtedly you will be glad to demonstrate your skill and test your remedy. I know that men of science always welcome the opportunity to experiment."

But Doctor Jackson, who was backing away, interrupted him. "As the matter stands," he mumbled, "it is impossible. I am most urgently committed to other business."

And in a confusion of talk, all meaningless, he withdrew.

Doctor Warren finished his period of service as head of the surgical department of the hospital, and withdrew on November 1. Dr. George Hayward came into charge.

There was a difference of opinion between these two men. Doctor Warren felt that Morton should be given every opportunity for experiment at the hospital. Doctor Hayward disagreed. His reason was one of medical ethics.

"Morton's formula is secret," he declared. "I do not intend to let patients inhale Morton's preparation during my period of service, unless all the surgeons of the hospital know what it is and are satisfied as to the safety of using it."

On November 7, he was to perform a very painful operation on a patient for whom everyone in the hospital had sympathy.

Her name was Alice Mahon. She was a girl of nineteen,

very pretty, desperately sick, but longing to live, although she had gone through indescribable suffering.

Dr. Henry J. Bigelow, who often came to Morton's office, was very much moved by the case.

"She will die from the pain alone. She hasn't the strength to sustain it!"

Two winters before, the girl had fallen on the ice, injuring her knee. Now, after eighteen months of unceasing pain, followed by hemorrhage after hemorrhage, it was evident that the bone was completely disorganized.

She had agreed to an amputation.

Young Doctor Bigelow, who could be, in spite of all his surgical skill, very tender, went to Doctor Hayward to make a personal plea.

"Only in this instance. Only to save her!"

The older surgeon turned a cold and perfect profile, tapping with his finger on the table. "I will use no preparation that is secret!"

Again Bigelow's French cabriolet stood before Morton's door. And in the dentist's office he pleaded.

"At least be on hand tomorrow," he begged, "and bring your apparatus!"

Morton agreed. "You can see," he explained, taking Doctor Bigelow down again to his carriage, "that if I make my remedy known now, it will be used everywhere indiscriminately, by men who are not fitted, who do not know how to properly employ it!"

"I understand," said the young doctor. "Yet the girl will die."

The dentist sighed. "What do you want from me?"

"A letter to Doctor Warren, offering the free use of your preparation to the hospital."

They went upstairs together, and at his worktable, Doctor Morton pushed away the flasks and bottles and sat down to write.

"I will be pleased to give the surgeons of the hospital any information which they may think desirable in order to employ this preparation with confidence."

The next morning he waited in an empty room at the hospital, while Doctor Bigelow went to the operating chamber.

The gallery was crowded. The whole surgical staff was in attendance, and Doctor Hayward was reading aloud the letter that Morton had sent.

He finished without comment and stepped back to confer in a whisper with Dr. John Collins Warren, who listened and shook his head.

In the galleries there was utter silence and tense excitement. Would Morton reveal his secret? Would the preparation, so mysterious, so potent, be made known at last?

The side door opened and two ward tenders came in with a stretcher. They lifted Alice Mahon to the table. Her eyes in a face paper white, almost transparent with suffering, were frighteningly large. Her lips moved but no one noticed.

Around the operating table there was a whispered conference. Doctor Bigelow was urging something with passion. Doctor Hayward turned his head. The handsome

profile stood out coldly. Doctor Warren, who had drawn back, stepped forward and spoke gravely, nodding his head.

Hayward seemed to hesitate. The eyes of the sick girl were on him. Then she turned her face on the pillow.

Again Warren urged. Again the tall surgeon, in his long black coat and high stock, hesitated. Then curtly he addressed one word to Bigelow. The junior surgeon hurried from the room.

Doctor Hayward stepped forward. For a moment his glance swept the galleries.

"On the advice of the other surgeons," he began, his voice composed as always, "I will allow Doctor Morton to administer an article by inhalation to the patient to prevent pain."

He had not looked at Alice Mahon. Those who were near saw the patient sigh and move her lips.

And in the galleries no one moved, no one whispered.

Doctor Bigelow came in, followed by Morton. Hayward nodded. Morton opened his bag and sat down at once on a stool by the sick girl.

Very quietly he spoke to her, showing her the apparatus, a little glass tube with a sponge and a valve in it, which she was to put in her mouth.

She looked up at him and took it trustfully. At first the vapor seemed to choke her. He bent down to reassure her.

She tried, drew in deeply, the valve rose and fell. Her eyes closed, and her hand, which lay in Morton's, relaxed.

He bent over her. Doctor Bigelow took her pulse. Mor-

ton nodded. "Your patient," he said to the surgeon.

The stillness of the operating room was oppressive, broken only by the quick intake of breath, and the occasional half-sob of the patient, as the valve rose, wavered and fell.

Swiftly the operation was performed.

There was no sound, no shrinking, as the knife swept forward. The bone was exposed. The sick limb fell. The patient slept deeply as if dreaming.

On awakening she did not know what had happened.

"This discovery must be announced to the world," declared Dr. Henry J. Bigelow. "These facts must be made known!"

He began a medical treatise, and considered it of such importance that he went to his friend, Dr. Oliver Wendell Holmes, the witty doctor and professor, who helped him to polish it.

Their enthusiasm for the discovery was so great that they sat up all night working on it.

"This will remake the whole practice of surgery," said Holmes. His lean, clever face, usually so calm, could show fire, too.

He wrote a humble letter to Doctor Morton.

"Everyone wants to share in a great discovery," he said. "May I suggest a name for the new preparation?"

Morton had called his sleep-giving remedy, "Letheon," after the Greek river of sleep and forgetfulness. Doctor Holmes, who was as skilled in writing as in medicine,

coined a new name, "anesthetic," and translated literally from the Greek it meant "not to feel."

"A new name for a new art in surgery," declared Doctor Bigelow enthusiastically.

His paper was finished. Two days after the successful operation on Alice Mahon, he appeared at the annual meeting of the Boston Society for Medical Improvement.

Buttoned into a flawless French coat of exquisite make, younger than any medical man in the audience, he read, in his clear, cultured voice, a paper which created great excitement.

It was a paper entitled, "Insensibility During Surgical Operations Produced by Inhalation."

The next morning the newspapers announced the discovery.

Instantly there arose the most amazing storm of protest from doctors, clergymen and dentists.

Banish pain? What an affront to the laws of nature and God. Clergymen preached sermons. Committees of doctors met. And a Boston dentist, Doctor Flagg, called together all his fellow-practitioners.

"Something must be done to stop Morton," he declared, "before we're all out of business!"

A committee of twelve dentists was appointed and moved into vigorous action. They interviewed patients who had taken the vapor, pieced together gossip, took down statements, scared, threatened, suggested. And finally, in a long advertisement, issued under an imposing list of professional signatures, they warned the public against

the dangers of Doctor Morton's preparation "for inducing insensibility."

The advertisement appeared in the Boston *Daily Advertiser* of December 12, 1846, and for a dozen years was to be used as evidence by the enemies of Morton.

It attested that the most hazardous results would follow on the taking of the vapor: bleeding of the lungs, melancholy, even delirium and death were to be predicted.

The flow of patients to Doctor Morton's office stopped.

Threatening letters came to him. Sarcastic articles and editorials were published. A certain Professor Westcott, who was later to be connected with the Baltimore College of Dental Surgery, the same school which had trained the dentist, wrote an article of denunciation for one of the Boston papers.

"If Doctor Morton can make me believe that this vapor is so very harmless, then 'Morton's Sucking Bottles for Babies' would be in great requisition, surely!"

Then the attack, venomous and scathing, from the medical journals, laughing at the doctors of Boston for being taken in by a quack. The famed *Medical Examiner* of Philadelphia declared with pity "that our physicians feel the greatest concern for the learned doctors of Boston who were caught in the meshes. We hope that the surgeons of Philadelphia will not be seduced from the high professional path of duty, into the quagmire of quackery, by this will-o'-the-wisp."

In this manner, some of the foremost medical writers in the country greeted Morton's discovery!

"Panacea . . . quack . . . impostor . . . swindler!" He was called by every venomous name.

"What shall we hear next?" asked the *New Orleans Medical and Surgical Journal*.

Yet in Boston, much to their credit, certain surgeons held fast. At the Massachusetts General Hospital, between October 18 and the first of the year, seven operations were performed with ether; twenty-nine patients were allowed to suffer the old torture with waking pain.

But Dr. J. Mason Warren, quiet, gentle, always hating the pain of surgery, employed the new method repeatedly, in his private practice.

He took Morton in his carriage, to Myrtle Street, at the west end of Boston, to give ether, while he removed a tumor from the arm of a woman. It was the first operation under the new anesthetic, performed in a private home, and the relatives were eagerly grouped around to see the miracle.

At Bromfield House, on November 21, Dr. J. Mason Warren, almost as much in request now as his father, operated again. Doctor Morton was called and gave the anesthetic.

In the back of the room there were a number of spectators. Among these, dark and unsmiling, he recognized Dr. Charles Thomas Jackson. It was the first time he was present at an operation with ether. It was the thirteenth time that Morton was giving the anesthetic on what might be called a capital occasion in surgery! Yet Jackson continued to claim the discovery. Rebuffs did not trouble him.

At the hospital, a few days later, an operation was to be performed, and ether was to be given. Jackson presented himself with a bladder of oxygen, saying it would counteract the effects of the asphyxia which came when the vapor was inhaled.

The surgeons replied they had never noted this symptom; that the patients were never troubled.

Jackson vanished.

"I know that he's plotting," said Morton to his wife. He felt Jackson's hatred almost physically, like a cold cloth laid between the shoulders.

He did not know that Jackson, on the evening of November 13, never having seen ether given, never having witnessed an operation under its effect, had written secretly to his friend M. Elie de Beaumont of Paris. To this distinguished geologist, member of the French Academy, voter in the most august body of scientific judgment in the world, he declared:

I request permission to communicate through you to the Academy of Sciences, a discovery which I have made and which I believe important for the relief of suffering humanity . . .

I have persuaded a dentist of this city to administer the vapor of ether to his patients . . . I then requested this dentist to go to the Massachusetts General Hospital and administer the vapor of ether to a patient about to undergo a painful operation.

He claimed the discovery as his own!

CHAPTER EIGHT

FOR SIX WEEKS WILLIAM WORKED DAY AND NIGHT AT the instrument maker's.

In his office there was a litter of flasks, tubes, valves, bottles, globes, sponges.

Then one evening he showed Dr. Henry J. Bigelow a new apparatus. Holding up to the lamplight a little glass globe, with a tube like a tea spout, and a sponge inside, he announced, "I have it!"

It was a new device for administering ether.

"You must send samples to Europe at once," advised Doctor Bigelow. He sketched the campaign. "To Professor Alfred Velpeau, Antoine Jobert, Jacquet Maisonneuve." And he named the famous French surgeons with whom he had studied.

"If they test your discovery and approve it, then the greatest of honors will follow."

Morton felt himself tremble.

"I mean recognition by the French Academy!"

"Not for me, surely?"

William sat down to write the letters. Half-dreaming, he held the quill between his fingers. Under the glow of the lamp it cast a black shadow like a mark of warning on the page.

"Six weeks ago," he wrote, "this discovery was tested for the first time . . ."

Six weeks? A whole life had flowed by!

And again came the sense of unreality that had possessed him since the day when he touched the glass tube, with its colorless liquid, to the printer's lips.

The letters were sent. The inhalers went out on the packet. Now, with growing anxiety and a sense of apprehension that he could not explain, he waited for the news from Europe.

Would the French surgeons test and approve his remedy? Would they believe his claims?

He had written to a friend, Dr. W. C. Brewster, a dentist for many years to the American colony in Paris, asking him eagerly to report all that transpired.

He waited anxiously for the letter.

December passed. January. Cold winds, cloudy days, storms on the Atlantic. Would the returning ship be delayed?

On a cold morning in February, the news came from the harbor at last, "The packet is here!"

He rushed to the dock. He waited for the distribution of mail. He climbed the slippery slope of Tremont Row, holding the package close under his cloak.

He locked himself with a beating heart into his little inner room. He broke the seals. He read one letter, then another, and finally, as if stupefied, he turned the closely written pages of Doctor Brewster's report.

Then the papers fell to his desk. He stumbled to the doorway. "Francis!"

His brother-in-law came running.

Morton held out the letter.

Doctor Whitman read and turned to Morton, incredulous. "But how could such a thing happen?"

Doctor Brewster had written that the French surgeons were bewildered when they got Morton's letters, and the inhalers he sent.

Who was this impostor that was making spurious claims, they asked.

It was already known all over the city of Paris that a famous American chemist was the discoverer of the new remedy.

As for the French Academy, M. Elie de Beaumont, a member, had read at the last meeting a letter of announcement from the true discoverer—Dr. Charles Thomas Jackson, of Boston!

The announcement from America had lain on M. de Beaumont's desk, unopened, for thirty days, he said. This was at Doctor Jackson's request.

"Can you fathom such treachery?" cried Morton bitterly. "In those thirty days I proved to the world that ether was safe!"

When his friends, Dr. Henry J. Bigelow and Dr. A. A. Gould, came to hear what had happened, they could hardly believe what he told them.

"There must be some mistake, some dreadful mistake!"

A committee of Boston physicians went to call on the chemist. Such a scandal, such a miscarriage of justice must be investigated.

Doctor Jackson surprised the physicians by greeting them with effusive cordiality, and with apologies.

Indeed, there had been a mistake. He hinted with deprecating self-praise and a peculiar show of humility that it was no doubt the great zeal of his friend, M. de Beaumont, that had caused the misunderstanding, the total misinterpretation, in fact, of his letter.

He was most eager, he said, to make amends. And to indicate the full measure of his feeling, he asked the committee to convey to Doctor Morton his personal invitation to an interview at which he would outline exactly how full reparation was to be accomplished!

Very happily the committee brought back this hopeful news to Doctor Morton.

He refused at first to face the chemist.

"I don't trust him. What good can it do?"

But his friends prevailed. "How much better it will be for Doctor Jackson to write a letter to the French Academy withdrawing his claims!"

And finally, more from weariness than from conviction, Morton agreed.

Now there was only one detail left: the date of the interview. It must be held before the monthly packet ship left for Europe, because if matters were not satisfactorily arranged, then Doctor Morton would have to send his own view of the case to the French Academy.

There would be no need, Doctor Jackson assured the committee which again waited on him in his laboratory, for Doctor Morton to write. All would be arranged, all would be satisfactory.

But he found it exceedingly hard to set the day for the interview. Each time the committee members called, there was a new delay, and new and more plausible excuses, but given so credibly each time, and with such fervor, that Doctor Jackson's sincerity just could not be doubted!

And it was not until the evening of February 28, the evening in fact before the sailing day of the packet, that Doctor Morton and Doctor Jackson were at last brought together, face to face, in the glass room of the latter's laboratory.

Morton did not sit down. "What do you intend to do?"

Jackson's manner was friendly, almost eager, as though he had only one feeling in his heart, to make amends. "I have prepared an article," he assured, "which will appear in the *Boston Daily Advertiser* tomorrow, and which will put the whole matter forever at rest!"

"May I see it?"

At this blunt question, the chemist seemed hurt, but his voice at once took on the quality of one trying to overlook an injury.

"Unfortunately," he said, "I have already sent it out, and I do not have a copy to show you."

The next morning, William opened the newspaper and found there an amazing announcement. The American Academy of Arts and Sciences, he read, had given Dr.

Charles Thomas Jackson full credit as the discoverer of ether!

And this news, said the newspaper, being forwarded now to Europe, would no doubt have the effect of bringing to the Boston chemist the famed award of the French Academy!

The article was written in the form of an interview with Doctor Jackson.

Morton, stunned, could not at first credit what he read.

Then Doctor Gould arrived, his face gray, a crumpled newspaper in his hands. "And we advised you to trust him!"

Doctor Bigelow came. He had astounding news. "But, there has been no meeting of the American Academy. It is scheduled for tomorrow."

The two physicians took a carriage to Cambridge. They went hurriedly to seek out Dr. Edward Everett, president of Harvard University, and president, too, of the American Academy of Scientists.

He was incredulous. There had been no meeting. But it was true, he said, that Doctor Jackson had offered to give a report to the Academy on the new discovery.

He had written to several members of this body, and had managed to get from them written invitations to present such a report.

"But," said Doctor Everett with the dignity that would distinguish Harvard's president, "I need scarcely say that my recommendation to Doctor Jackson to address a paper on this subject to the American Academy can in no de-

gree be regarded as giving the sanction of that body to his statements."

Doctor Jackson was confronted by Morton's friends. His answer was calm.

"I cannot help it," he said, "if the newspapers misquote me!"

In the meantime the false story had gone to Europe, ringing now with praises for the discoverer, whoever he might be.

Ether had been tried, at last, in Paris, where everyone gave credit to Doctor Jackson, and Morton was looked on as a nobody, a spurious impostor.

At the Hospital St. Louis, ether had been tested in a great public demonstration by Joseph Malgaigne. "A glorious triumph for humanity," the French surgeons declared.

From England came hearty news. "A marvelous thing!" cried Sir James Clarke, the noted physician, on seeing his first operation with ether. And the famous lecturer on medicine, Professor James Miller, declared to his classes, "A new light on surgery . . . a boon conferred on mankind!"

The Paris correspondent of the Boston *Atlas* wrote home to his paper, "This great discovery is making a sensation in Europe, and is regarded as next to those of Harvey and Jenner."

He suggested that the American government ought to vote the discoverer, whoever he might be, a gift of one hundred thousand dollars. "Or else," he wrote, "a grand subscription should be set on foot throughout the civilized

world in behalf of this great benefactor of the human race!"

And Morton, in his office, at the desk piled high with flasks, valves, sponges, and unpaid bills, put the papers away and exclaimed bitterly, "To me alone of all the world this discovery has been fraught with suffering!"

Another claimant had arisen, another friendship had been broken.

The new blow came from Dr. Horace Wells, of Hartford!

Wells, who had gone home silently from Boston, did not remain silent long. He wrote a letter to his home newspaper, the *Hartford Courant*, declaring that he, and not Morton or Jackson, was the discoverer of ether.

"I introduced the idea of inducing insensibility through vapors both to Doctor Morton and to Doctor Jackson, neither of whom had prior knowledge of this principle."

"How can he make such a claim?" cried Morton. "In all the years that I knew him I never saw a flask of ether in his office, or heard him refer to it.

"But I do know and can attest," he went on, "that he did experiment with nitrous oxide gas!"

As if anticipating this argument, Wells had written, "But the principle is the same."

This at first was his claim. He went no further. One day, Doctor Morton found on his desk a letter written in the pointed, nervous script of the Hartford dentist.

"It is not my wish," wrote Doctor Wells, "to claim all the credit for the discovery of ether. I am willing that you

should be rewarded for your perseverance in its introduction to general use."

Doctor Whitman came in. He was ill, coughed constantly and could do very little work in the office. He picked up the letter.

"Is he audacious, or mad?"

Morton shook his head. He felt numb. What was there to say? How could he defend himself?

Doctor Wells, who had a new business now, that of selling art reproductions, had borrowed the money somewhere, and gone to Paris, to buy prints.

While he was there, he called on the American dentist, Doctor Brewster, and to this shrewd socialite-dentist, he told an amazing story.

"I not only discovered the use of sleep-giving vapors, I actually instructed a Hartford physician, who gave ether and performed an operation at my direction in 1842—four years before Morton's experiments."

His listener was incredulous. "Do you have proof?"

Doctor Wells regretted. "I brought none," he replied uneasily.

"Then go back to America and get it. And until you do," shot back the Parisian dentist, "I would make no more claims."

But the talk everywhere in Paris was of ether. Doctor Wells could not withstand the temptation. He gave an interview to a newspaper. And eventually the Boston *Atlas* reprinted from this paper the full story of his claims!

When Wells returned to America, he neglected his art

business, having tired of it as easily as he had of his exhibits of birds, and he devoted himself to a new interest—his campaign against Morton.

He brought out a pamphlet, "The History of the Discovery of Nitrous Oxide Gas, Ether and Other Vapors," in which he gave himself full credit as the discoverer of both laughing gas and ether.

He made much of a supposed operation with ether by Doctor Marcy of Hartford, in 1842.

"If that operation was performed, there must be proof of it," said Morton. He had gotten over his numbness and was now willing to fight.

He inserted an advertisement in the *Hartford Courant*, offering a reward of one hundred dollars to any person who had witnessed, knew of, or had ever heard any report of the operation said to have been performed by Doctor Marcy.

"In every instance where I have given ether, I can produce sworn depositions. I can show records, and furnish the names of witnesses. What can Doctor Wells show?"

This was Morton's challenge. Doctor Wells did not answer it.

"Obviously," said Doctor Morton, "his claims are disproved."

But the public, which hears always with half an ear, gave approval to neither side. There were people who supported Wells, as there were people who supported Jackson. And there were also those who still shook their heads, and said that the new discovery was a fraud.

Doctor Morton now had an agent, Mr. Edward Warren, a nephew of Dr. John Collins Warren, and a distinguished lawyer.

"Our only hope," he said to Morton, "is to get the government to take over your discovery!"

He explained how Edward Jenner had been rewarded by the English parliament for his discovery of vaccination, receiving vast gifts of money for "his benefits to mankind."

Morton listened.

He had made his discovery enthusiastically, recklessly, as the inventor works. And then suddenly, businessmen, attorneys, promoters were grouped around him. He was advised, overwhelmed, told repeatedly that he would become rich and famous. And this in the midst of attacks. He was bewildered.

"Do what you think is fitting," he replied.

Mr. Warren went to Washington. When he tried to present his petition to Congress, he found that the dentists of Boston had preceded him.

A fact-finding "Committee of Seven," organized by Doctor Flagg, had forwarded to Washington a report on the dreadful effects of ether.

Letters came from clergymen, dentists, physicians, and surgeons. "We hope," wrote one well-known doctor, Prof. D. T. Mütter of Philadelphia, "that we shall not find so distinguished a body as our national Congress lending itself to the advancement of quackery!"

And from Connecticut came a lawyer to say that Mor-

ton should not be rewarded. He was an impostor. Doctor Wells was the real discoverer.

The memorial failed.

Mr. Warren, lean, clever, resourceful, returned from Washington.

"We will try again later," he said. "This is not the time to fight for a hearing." Congress had been in full debate on the war which had broken out with Mexico.

General Winfield Scott, commander-in-chief of the American armies, had sailed for Vera Cruz. He hoped to march on Mexico City.

"There will be fierce and bloody battles," said Mr. Warren.

Morton looked up. "Now," he said, "there will be use for my discovery."

He wrote to the Secretary of War, to the Secretary of the Navy. "We will send persons properly trained to give ether. Instruments will be furnished at cost. And the charge for the use of the vapor will be nominal—two cents for each patient!"

The replies were cold. The Navy regretted. "It was not expedient at this time to incur such expenses." The surgeon-general of the army had given the opinion "That the new substance is ill adapted to the rough usage of the battlefield!"

"They'll come to us yet!" predicted Warren. He worked a great deal now in Morton's office, where the dental business had subsided, and only the affairs of ether were handled.

There were agents who came to sell licenses in distant places, doctors who came to be instructed. And along the walls there were piled up boxes of inhalers. Fifteen hundred had been ordered from a single English firm.

Wherever ether was used, it was Mr. Warren's plan that a fee should be paid to Doctor Morton. There were agents in Egypt, in India, all over the world.

"But don't trouble yourself over these affairs," Mr. Warren directed.

Morton busied himself with a magazine, *The Letheon*, which went out every week from his office. It contained instructions, records of cases, the opinions of surgeons on ether.

He wrote a thin textbook and dedicated it to the doctors of the Massachusetts General Hospital. He went to Dr. John Collins Warren, to Doctor Bigelow, to Doctor Hayward, who wrote articles for his magazine, to which he added a new department, "The Voice of Europe."

Losing himself in this work he forgot the confusion of his personal affairs. His assistants, Spear, Leavitt, and Hayden, had gone. His brother-in-law, Doctor Whitman, was too ill to come to the office. The dental business was neglected. Debts were unpaid. His wife reminded him of payments due on the house, not entirely completed.

He had named the farm, in honor of his discovery, "Etherton Cottage."

"I'm afraid," said his mother grimly, "that ether won't pay for Etherton."

He looked at her but didn't answer. He remembered

his excitement in those feverish weeks before the discovery. He remembered the feeling like white lightning that possessed him.

It was with a sense of bewilderment that he listened to his agent, who predicted, "There's a fortune in this discovery!"

And he sketched the campaign which would sell the right to use ether to every physician in America. "And then there are the foreign rights."

In such moods, Mr. Warren, with his dark face aglow, was exultant.

But one morning a blow came. In the New York *Herald Tribune*, which he had sent to him from his home in New York, there was an article.

He read two lines to Morton. "All along General Scott's line of battle, ether is being used."

While the surgeon-general of the army had said of the new discovery, "it is inexpedient," the field surgeons, walking among the terrible piles of wounded, had not had the heart to deny the men who were suffering.

"Give us something to stop pain!"

And again and again, in one hospital tent, and then in another, from a folded napkin, a handkerchief, a sponge; the vapors of ether were given.

Quietly, crudely, without plan, but because of terrible necessity, the use of ether had been introduced into the army.

There had been no regard for Morton's patents, and no official recognition of his rights.

"We are ruined!" cried Warren, who with his clever mind saw the full import of what had happened. Every owner of a license would want a refund.

"If the army doesn't pay for the right to use ether, why should we?"

The letters came to the Letheon Institute in basketsful. Those who had purchased licenses from the Lethcon Institute refused to pay for them. Some people asked for refunds. Agents spread out in distant countries wrote saying that Doctor Morton should pay their expenses for returning.

But Mr. Warren, after the first shock, was again ready with new plans.

"We must sue the government!"

There were two impediments. "It must be proved irrevocably that you are the discoverer." Then there was the cost of such a suit, which would be tremendous.

And Jackson's campaign had not stopped. One morning he sent a fellow-chemist, Dr. Martin Gay, a little, bustling man with side whiskers, and a wound-up, self-important manner.

He had brought with him two lanky young men, whom Morton recognized as assistants in Jackson's laboratory. The three stood together, side by side, belligerently before Morton's desk.

He looked up wearily. "What is it now, gentlemen?"

As if at a signal, Doctor Gay took out a document from his bosom. He tore it pompously across. It dropped to the floor.

"Before these two witnesses," he announced, "I have destroyed your papers of partnership with Dr. Charles Thomas Jackson. He wishes no further rights in your patent."

That afternoon, Doctor Jackson, addressing the Massachusetts Medical Society, threw out his arms dramatically. "I was swindled into applying for a patent with Morton. But only today, only a few hours ago I have destroyed this disgraceful bond!"

Morton had insisted, he said, upon making money from the discovery. "I, as a scientist, could brook no such practice.

"From this hour," he went on, and the applause rose, "let this discovery be free to all mankind."

What he did not announce was that he had held on to his rights very tightly, until the moment when the army action in using ether had destroyed the values of the patent.

But he had histrionic abilities. He could make a good impression.

"What next?" cried Morton.

At home, at Etherton Cottage, his wife was ill. In February, a second child, a little girl, Marion, had been born. Mrs. Morton, worn down by the tumult and agitation of her husband's life since the discovery, had not recovered. Early in the spring she was taken ill with serious bleeding of the lungs.

He spent much time at home.

Coming down one morning on tiptoe from her sick-

room he was informed by the housemaid that a gentleman had come to call from the city.

He was puzzled. Who would come to him at Etherton? And he went into the study to see.

He found Jackson's lawyer waiting.

"What do you want here?"

"To help you," answered the attorney. He was tall, with bony hands, and a long black coat which he lifted annoyingly when he sat down.

He opened a portfolio of documents. "For months we have been gathering evidence," he said, "on your past life.

"We believe, Doctor Morton, that you will be pleased to give up your false claims to ether." He had spoken softly at first, with an irritating unctuous smile. But now the bony finger rapped on the table.

"Otherwise, we will publish these scandals in every paper and publication in the land!"

It was not until after the lawyer had gone that Morton realized with what anger he had sprung at him. When his wife called from upstairs he had not the courage to go up or to be seen by her.

He was still trembling when he took up the pen to write to his agent, Mr. Warren, who had gone to Paris to press his claims before the French Academy.

"Jackson threatens to show these papers, which are full of lies, to my father-in-law, and to my wife who is so gravely sick, and for whom the least commotion might now be fatal. But he cannot intimidate me! I shall not yield one fraction of my rights."

He had begun to gather evidence at last, for presentation to the French Academy. He was getting sworn statements from the people who had witnessed his first efforts with ether: from Spear, his assistant; from Leavitt; from Theodore Metcalf, the chemist; from Dr. John Collins Warren.

To Elizabeth, white and silent on the pillows, he read with triumph Doctor Warren's clear letter.

The senior surgeon of the Massachusetts General Hospital wrote: "I hereby declare and certify that I never heard of the use of sulphuric ether by inhalation, as a means of preventing pain in surgical operations, until it was suggested by Dr. Thomas Green Morton in the latter part of October, 1846."

What of Jackson's claims? Could the clarity of this statement be questioned?

Dr. Martin Gay had written a pamphlet on Jackson's behalf. And in it he asserted that Dr. Charles Thomas Jackson had made use of ether in personal experiments, several years before Morton.

The date given was the same one that Wells claimed—1842!

A copy of this booklet came to Morton's desk. He turned it over bitterly. New griefs had come to him. His wife was still ill, and his brother-in-law, kind Francis Whitman, so gentle, so devoted, had been taken sick, too.

At home he hurried from one sickroom to the other. In the office he pushed aside the bills, the threats of lawyers, the suits of agents who had been licensed, and ignor-

ing, too, the news of Jackson's new intrigues, of Wells's bolder and more arrogant claims against him, sat down to frame his paper to the French Academy.

All the hatred, all the blows, all the sorrows, all the recriminations, had left no scars on him. Very simply he began the "Memoir" which was to remain memorable.

"I am ready to acknowledge my indebtedness to men and to books," he wrote.

And then he paused and with a sigh he remembered the feeling that had first prompted him.

"I had great motive," he went on, "to destroy or alleviate pain."

CHAPTER NINE

EVERY NIGHT WHEN HER HUSBAND CAME HOME, Elizabeth asked anxiously, "Did the letter come?"

It was two months since Mr. Warren had gone, and from Paris there was still no news. Had the "Memoir" been presented? Was it well received?

"I am certain," said Elizabeth, "that the French Academy will have to act now in your favor. I am certain that you will be awarded the prize for the discovery!"

She dreamed, lying back in her chair by the fireplace on a winter evening.

"When you get the prize and the medal from Paris," she mused, "what will happen afterward?"

He sighed. His smile was rueful. He leaned toward the fire so that she should not see the expression on his face.

"Congress might then take action."

"Do they always reward a discoverer?"

He answered as if by rote. "They rewarded the heirs of Robert Fulton. In England they rewarded Jenner, three different times, by special act of Parliament."

Elizabeth smiled.

"How much do you think they will give you?"

"My petition was for a hundred thousand dollars."

She did not notice his bitter expression, but closing her eyes began to count off blissfully on her fingers.

"We'll pay off everyone," she mused, "the nursemaid, the butcher, the grocer, the dressmaker . . .

"Oh, William," she sighed. "I never realized, I never knew how wonderful it could be to owe no one."

He got up, standing tall by the fireplace. But his face was worried. "That's a luxury I would like to experience!"

In every street of Boston he owed money: to the instrument maker, to the chemist, to the landlord of his office.

In the autumn, his brother-in-law, gentle Dr. Francis Whitman, had passed away suddenly. His shock at the boy's death had blinded him at first to the practical loss he had also suffered.

Under Doctor Whitman's management there had been some income from the dental office, to which Morton, in his preoccupation with ether affairs, had given no attention.

Now the dental office was closed. And the Letheon Institute was also bankrupt.

"I go to my office each day to attend to my lawsuits," said Morton to a friend whom he met one day in the street.

Everyone who had purchased the right to use ether was suing. In his office, the inhalers, which he had ordered at Mr. Warren's request, were piled to the ceiling.

His whole hope now was for the news from Paris, the good news that his agent, Edward Warren, would send.

And finally, the packet returned, and finally he had in his hands the letter.

He read it slowly, sitting alone in the disordered, empty office, where he came every day to a desk piled high with dreary documents.

The pages fell from his hands . . .

"Everyone is disposed against our cause," Warren had written.

"The greatest difficulty to contend with here is the apparent sanction of the American Academy of Arts and Sciences.

"This false story spread by Jackson is everywhere believed.

"When I went to the American consul, Mr. Walsh, he refused me a hearing."

As for presenting the "Memoir" by Morton to the French Academy, the way here had been just as hard.

"Professor Velpeau, who is the head of the committee, refused to read the paper saying it was too long."

Warren had copies made in small print, and had to bribe a porter to place copies on the chairs to be occupied the next day by the Academy members.

"In this humiliating way," wrote Morton's agent, "I was obliged to proceed!"

The sting of this last sentence was like a reviving blow.

Twenty minutes later, Morton was in the office of the director of the board of trustees of the Massachusetts General Hospital.

"What do you want us to do?" asked the Honorable

Nathanial Bowditch. His keen, dark face showed no expression. He had listened without comment, in a room filled with statuettes, ornaments, signed pictures.

He was one of the most influential citizens in Boston, honored for his shrewdness, his high conscience, his interest in public works.

Morton faced him.

"At the Massachusetts General Hospital," he said, "ether was discovered. Here, under this roof, with the sanction of your Board of Trustees, it was first used!"

"How can we help you? Do you want an opinion, a recommendation?"

"No!" cried Morton. "I want a public hearing! Once and for all let it be proven who is the discoverer, Jackson or I."

"You want the hearing to be held here?"

"Yes! Let twelve men sit in judgment, twelve impartial men whom your Board of Trustees will appoint for this function."

Mr. Bowditch sat silent for a moment. "Are you willing to accept the decision . . . no matter what it will be?"

"I am willing!"

Two weeks later the hearings began. They were held in the long room with its waxed table and painted portraits on the wall, where the trustees met for their annual meetings.

Twelve men, as Morton had asked, were appointed to the informal jury. Some were lawyers, some were scholars,

and several were members of the American Academy of Scientists.

They began to hear evidence.

Doctor Jackson was invited and refused to come, saying he would honor "no self-appointed jury!"

"Are we then to conclude, sir, that you have no case?" wrote the canny chairman, Mr. Bowditch.

And as he had expected, Doctor Jackson replied, "I am sending my representative, Dr. Martin Gay."

Doctor Gay addressed the jurors. "My friend and colleague, Dr. Charles Thomas Jackson, knew and made use of ether in 1842—four years before Morton!"

Three times he returned for hearings, and each time he made the same claim.

The jurors cross-questioned. The chemist produced documents. Jackson had used ether on himself to "ease the irritation caused by the inhalation of chlorine gas."

"But he used it on no other person?"

"No."

"And he had this knowledge for four years and made no use of it?"

"He was much too busy with other scientific affairs!"

This answer made a sensation. Was it possible that a man would know of such a boon to mankind and yet, for four years, forget that knowledge?

Dr. Henry J. Bigelow published an open letter to Doctor Jackson in the newspapers. "You claim to have discovered ether in 1842. And yet you kept the discovery to yourself during these four years?"

"Do you expect the world to believe you knew its value? Do you expect it to reward you for letting people suffer during that time?"

The distinguished father of a distinguished son, Dr. Jacob Bigelow of Harvard's faculty, senior surgeon at the Massachusetts General Hospital, and president now of the American Academy of Arts and Sciences, wrote, "Then Doctor Jackson stands accountable to the world for the human misery he allowed!"

The newspapers thundered. The people of Boston argued in every alleyway, tavern and drawing room. The hearings droned on.

Doctor Morton was called to the jury room. Mounting the stone steps of the hospital, passing the high, cold columns, he remembered the morning in October when he hurried with Mr. Frost to the operating room, where Gilbert Abbott lay waiting.

He rose before the long table of jurors. He read the plain, simple words of the "Memoir" that he had prepared for the French Academy.

"I had much cause to alleviate pain . . ."

He was heard in silence, as once he had performed in silence before those waiting galleries.

He went home alone.

Afterward, from excitement, he felt himself tremble, an inner tremor that would not stop. Then he had the sensation of knives slashing at his temples.

The doctor was called. "Neuralgia," he said, "you will have to be calm."

But even the laudanum drops that he left did not stop the pain. William sat day and night in an armchair, swaying, holding his head, forgetting even the decision for which he waited.

Then the news came.

Sitting up, he asked Elizabeth to reread the clear and triumphant words that he could hardly believe.

"Dr. William Thomas Green Morton is the discoverer of ether, Doctor Jackson being self-deceived in this matter."

"William, do you hear? Do you hear?"

She read on, half sobbing. There was a long review of Morton's labors, the loss of his business, the ruination of his health.

"He has become poor in a cause which has made the world his debtor."

She wept. "What will the French Academy say now?"

William got better. He went into the city. Everywhere men who had ignored him now shook his hand. And even the merchants who had harassed him were cordial, saying they would wait.

"We understand your prospects are excellent, Doctor Morton!"

He dreamed of days full of peace at Etherton. No more debts, no more struggles, no more excitements! But would Jackson rest? Was it conceivable?

He waited uneasily, as if for a blow that was expected.

He remembered Jackson's dark anger against Morse. Now all this hatred was transferred.

"Such a force," he wrote with a sense of premonition to Mr. Warren, in Paris, "can never be stopped!"

He opened the papers one morning. A whole page was occupied by a letter from Jackson. It was addressed to "The Friends of Science and Humanity." It attacked with vehemence the "false report of the trustees of the Massachusetts General Hospital in Mr. Morton's favor."

What excitement followed! All the people in Boston took sides!

The Honorable Nathaniel I. Bowditch wrote an impassioned defense of the hospital's report on what was now known as "the ether war."

Jackson's lawyers attacked this paper. The battle was on again.

"I shall never know peace," said Morton.

One evening he came home from the city very dejected.

"We have one enemy less," he said to Elizabeth. His lips trembled.

"Who?"

"Dr. Horace Wells is dead!"

She put her hands to her face. "How did it happen?"

Wells had moved restlessly from one business to another, growing more irresponsible, more irritable, and more hard to manage, according to the tales that were told.

His wife and child had suffered. He went to New York. He rented an office, and tried to sell to dentists there the right to use nitrous oxide gas as an anesthetic.

The dentists laughed at him. They would not buy the

licenses he offered, they would not attend his demonstrations.

He began to drink, and people said he also began to inhale the gas himself, using it as a kind of intoxicant.

One night, being half drunken, he threw a bottle of acid into a woman's face, a woman from the docks who had followed him.

There was a crowd, policemen came, he was taken to jail and locked up. And there in the New York city jail, on the night of January 21, he killed himself!

"Oh!" cried Elizabeth. "This discovery has brought nothing but suffering!"

And in the days that followed at Etherton, there was want and pain. William, worn out by lawsuits, by the pleas of creditors, by Jackson's attacks growing every day more vehement, lay sick in his bedroom.

The doorknob was muted. The children in the nursery down the hall were hushed. Every sound was agony for him.

Doctor John Homans, the family physician from the city, was called, and came without asking a fee. "Complete nervous collapse," he said. "Violent attacks of neuralgia. He must have no agitation, no cause to be concerned!"

"Concerned?" cried Elizabeth. "How and from what are we to live?" And with trembling lips she admitted how acute was her want, how dreadful her predicament, "in spite of my husband's boon to the world!"

When this news was heard in Boston, immediately a meeting of the leading doctors was called. The trustees of

the Massachusetts General Hospital were consulted.

"There is one word," said the elder Doctor Bigelow, "that we will not speak here."

His son, Dr. Henry J. Bigelow, sophisticated, with a charm and warmth that showed through the exterior of his European manners, added quietly, "Let us rather show to Doctor Morton, at this time, our full appreciation of his efforts."

And the Board of Trustees at once voted to raise a testimonial fund of one thousand dollars.

Two weeks later, Morton, still weak from his illness, received a delegation in his study.

The gentlemen, dressed in frock coats, high, stiff, impeccable stocks, said they had come to present him a gift "of appreciation from the people of Boston."

He took with incredulity the gift from their hands. It was a small silver casket, which bore two lines of engraving.

*Testimonial in honor of the Ether Discovery
of September 30, 1846.*

And below were the words which reached as if with a certain hand to the one spot of pain locked up in his heart.

*He has become poor in a cause which has
made the world his debtor.*

In the casket lay a scroll, inscribed with the names of the contributors. He read them over with wonder.

All his friends and co-workers in the discovery of ether were there, as if attesting again their belief in his claims:

Dr. John Collins Warren, Doctor Bigelow, Doctor Hayward, Dr. Oliver Wendell Holmes, the Honorable Nathaniel Bowditch. And then a long list of distinguished names, men eminent in other fields.

His finger passed over each name. "I didn't know!" he murmured. "I didn't believe . . ."

Under the scroll lay the testimonial gift—one thousand dollars!

And as the physicians had hoped, this reviving gift, this graceful gesture of support and appreciation, could have only one effect on a man as finely drawn, as sensitive as Morton.

He got well. He was able to fight again!

Mr. Warren returned from Paris. He brought back the news that the French Academy of Scientists had not yet come to a decision.

"It may take years," he said.

But Morton's manager, the resourceful nephew of Dr. John Collins Warren, had not returned without a plan.

"We must carry our fight to Washington!"

Since the government had invalidated Morton's patents, the government must pay the discoverer for this loss.

Already the doctors of Boston had sent a petition to Congress asking a national gift for Doctor Morton "as a public benefactor."

* * * * *

For ten years, Morton was to haunt the halls and corridors of Congress, a man living on hope, sustained by struggle.

Three times bills were introduced, in the Senate, in the House of Representatives, asking a gift of one hundred thousand dollars for the discoverer of ether.

Powerful friends rose to wage the battle: the "little giant," Stephen A. Douglas of Illinois, who used all the power of his oratory; and beetle-browed Webster, who spoke out in stentorian sentences.

But each time, and at the crucial moment when victory was almost certain, the enemies of Morton arose and turned the balance.

Once it was the lawyers who had convinced poor Elizabeth Wells of Hartford, that her husband's claims had a chance, and who came now to question Morton's.

Twice it was Jackson, thriving, growing more resourceful, more bitter as the struggle protracted. He sent lawyers to Washington. He had articles printed in scandal-making papers, attacking Morton's character, trying to prove him a swindler, a thief, an immoral person.

"We will not listen to such testimony," cried one of the Senators, at one of the countless meetings of special committees.

Morton borrowed money to sue Jackson for libel. The struggle, wearily, drearily, dragged on. . . .

In Georgia a new claimant had arisen. A country physician, Dr. Crawford Long, writing a belated medical paper, said modestly, that in 1844 he had given ether to a patient, charging two dollars both for the use of the anesthetic and the operation.

When Jackson heard this news, he took the train at

once to Atlanta, where the country doctor, now turned pharmacist, made a modest living as an apothecary.

"Join forces with me. We will ruin Morton!" he offered. "We will make you famous."

But the modest, quiet country doctor, who had used ether, forgetting to tell the world of its benefits, shook his head.

Did the merit lie in casual discovery? Did this not happen often enough in the laboratory? But the man who saw the benefit and who convinced the world, was he not in the truest sense the discoverer?

The debates in Congress continued. Morton was asked to demonstrate ether. The Congressmen and their families came flocking idly as if to a spectacle.

The show was held in the committee rooms. "Most ingenious . . . most interesting."

The ladies, in their full gowns, squeezed into the room. Some wondered if they would faint from the smell.

"But who is the true discoverer?"

Reports were drawn, by the committees, by the sub-committees. Opinions were sought from great authorities. Some were for ether, some against it. Morton's "Memoir" to the French Academy was included; the oratory of Wells's lawyers, the claims of Doctor Jackson.

Tons of material . . . mountains of words . . . no one was ever to read it: claims, counter-claims, depositions, sworn statements.

Too much was said for the matter ever to be clear again!

And Morton himself was sometimes confused, too

weary to go back, too weary to remember all over again.

Mr. Warren had dropped away. How long could a man work without money? And his friends, Doctor Warren, Doctor Gould, Doctor Bigelow, concealed only with concerned politeness their natural weariness.

It is like a man who is sick too long. He wears out even the concern of his friends.

"It is too long! It is too protracted!" Morton sometimes felt like crying.

He went to Washington. He came back. He was called, by a lawyer, a committee member, and returned again. And meanwhile the merchants to whom he owed money waited. "Will he get the prize? Won't he?" And alternately they gave and refused credit to his struggling family at Etherton.

Elizabeth did not complain. And in spite of her humiliations and sufferings, her voice remained calm and her manner gentle.

Even her fine beauty was untouched. She had grown mellow, more quiet, more assured—one of those fragile, delicate women who bear trouble and show no sign.

"You are the only one!" said her husband. His whole refuge was his home. Here he forgot struggles and insults and bitterness.

His joy was to build a playhouse for the children, and occupy himself with the affairs of the farm, when for a few days he came home to stay.

"I told you," his mother would say dourly, "that you should have been a farmer."

He sighed. "Who can choose?"

Had he chosen? Had he shaped his life? Or had it in this bewildering pattern been shaped for him?

He floundered, waiting for decisions he could no longer affect, waiting for a destiny he could no longer shape.

For months, then for years he waited for the news, the fateful news from Paris. Finally it came. 1850! Four years since his first appeal to the French Academy of Scientists.

For four years they had deliberated. Their decision was still divided!

He read the formal statement that had been sent him. And suddenly all the feeling that was dormant stirred, and his face grew hot with a flow of blood, and he had the sensation that he could not breathe.

"Elizabeth!" he cried. "Elizabeth!"

When he was better, he reread the letter. "The commissioners are of the opinion that there are two distinct awards to be made, twenty-five hundred francs to Mr. Jackson for his observations and experiments on the anæsthetic effects of ether, and a similar prize to Mr. Morton for having introduced this method in the practice of surgery!"

He threw the paper down. "I will not give houseroom to anything bearing Jackson's name!"

He wrote this to Doctor Brewster in Paris. He wrote this to the French Academy.

His protests were ignored.

In due time came the official package—a medal. He opened the box, held the golden coin bitterly in his hands.

On one side was carved a head of Minerva, the goddess of wisdom, her forehead garlanded with laurel leaves.

The prize of victory!

On the other side was an inscription. It read simply,

Academia des Sciences

Prix Montyon

Medicine and Surgery

W. T. G. Morton

1850

The word *ether* was not mentioned.

If the award brought bitterness to Morton, it stirred Jackson's hatred more than ever before. He declared, "The medal that Morton holds is a forgery. He had it made to order, probably in Paris."

Morton heard this from a friend. He said wearily, "The strategy of the opponents is to wear out my life and be in at the death."

The struggle, he felt, would never cease.

He continued his appearances and his appeals before Congress.

CHAPTER TEN

THE MEMORIALS TO CONGRESS HAD FAILED. THE AWARD of one hundred thousand dollars, now almost voted, eagerly waited for, anxiously anticipated—was never granted!

Sometimes it was the acrimony and bickering of dark-visaged Jackson and his ever-busy lawyers that prevented. Now it was the busybody attorney who hoped to make capital out of the claims which someone had revived for poor, bewildered, genteel Elizabeth Wells.

Morton went to Hartford. He appeared before the United States Commissioner there. He took sworn testimony from witnesses. He sent pounds and boxes of material to Congress.

Oh, the bitterness of words and more words and more words. Lawyers spent their careers, some fighting for Jackson, some for Wells, some for Morton.

In the sea of words, the ocean of printed paper and statements, Morton himself sometimes felt lost, and the deluge continued, the struggle did not cease. Who discovered ether: Morton, Wells, Jackson, Long? There were four claimants. To whom was the credit due? Whom should Congress repay?

Year after year senators revived the issue. Congressmen

repeated year after year the old wearisome, twisted arguments.

Morton had a boxful of medals: the Montyon Medal from the French Academy, which he looked on always with pain, knowing half of the award had been given to Jackson; the Order of Vasa from Norway and Sweden, the Cross of the Order of St. Vladimir from Russia.

Year after year Jackson planned new attacks, more bitter ones on Morton. The attempt to wrest the prize of fame from him fully had failed. The attempts to blacken his character and prove him a swindler, a thief, a depraved man, had likewise failed. The Congressional committee to whom he had submitted this character-defaming material had refused to consider it.

His last resource was to ruin and humiliate Morton financially. He instructed his lawyers to buy up every claim, every debt against Morton.

He wrote to the pastor of Morton's church in West Needham. He instigated a whispering campaign in the little town, where the Morton family had so long resided.

Every storekeeper in the village was poisoned. Stories were spread even to children. And one day, the villagers, responding to the evil tales, inflamed by them, made an effigy of Morton, the discoverer of ether, and burned it in the village square.

A sheriff came to Etherton Cottage. Morton, coming home from the city, found the stranger on the veranda. His wife was upstairs crying.

"Who is he? What does he want?"

"He has come to take possession of the house," answered Elizabeth Morton.

The little girl, Elizabeth, delicate and dark-eyed like her mother, looked up.

"But he can't have my playhouse," she asserted.

Near the brook, on a green sloping field, Morton had built for the children a little playhouse with miniature windows and chimneys.

"I won't let him have it!" declared the child.

The little boy, William James, almost ten, stood in the doorway. "What about grandpa's cottage?" He could be more serious. "Where will he go?"

Morton hurried downstairs. "I have been much persecuted," he said. "I know that this is a plot, and I know who is the instigator of it. Give me time to look into the matter and I will settle these debts."

But how he would settle them he did not know. He went to Boston the next day and walked the streets gloomily. What should he do? To whom should he go? He had gone from home so that his wife would not see his helplessness.

"Doctor Morton!" Someone was greeting him. Someone was shaking his hand.

He looked up in confusion, distraught. It was Mr. Amos Lawrence, a trustee of the Massachusetts General Hospital, and a gentleman distinguished in Boston affairs.

He looked at Morton, at the drawn appearance of his face, at his expression of melancholy.

"You have been out of town so long." He spoke quietly. "How are things going with you?"

"Badly," answered Morton, whose reserve broke down before this interest. The whole tale of bitterness and pain poured out. "He has bought up all the claims against me . . . and now at a forced sale, at the hands of the sheriff, I am to lose my home!"

"Doctor Morton!" cried Lawrence. His face, usually cold and restrained, showed sudden feeling.

"Leave it to me, I beg you. Nothing will happen." He went to the home of aged Dr. Jacob Bigelow, the same Bigelow who had written, "Doctor Morton took the risk and labor necessary to demonstrate the safety of ether."

"Morton in need?" Bigelow was horrified.

If Congress would not reward this benefactor to the human race, then the medical profession should and would.

He called a meeting at his home. His son, the famous surgeon, Dr. Henry J. Bigelow, known as the inventor of the Bigelow operating chair, known, too, as a foremost authority on anesthetics, was there. There was present, too, tall, gentle Dr. J. Mason Warren, who had witnessed the first ether operation when it was performed by his father, Dr. John Collins Warren, on that memorable day, October 16, 1846.

The elder Warren had died, bequeathing his body for dissection, for the purposes of science; willing to the Massachusetts General Hospital his surgical instruments.

Dr. George Hayward came, Hayward who had been

cold at first, out of natural caution and skepticism, but who afterward had written, "To Doctor Morton, I think, must be awarded the credit of being the first who demonstrated by actual experiment on the human subject the existence of this wonderful property."

There was not a hospital in the world where ether was not used. There was not a surgeon who questioned its merciful oblivion.

The old controversy at this meeting was not renewed. The elder surgeons of the great hospital had always been firm in their belief that Morton, and Morton only, was the discoverer.

"Morton in need? Morton persecuted?" Every man with a twinge of conscience opened his wallet. And then before the trustees of the hospital a resolution was laid. The hospital should vote a sum of one thousand dollars to start off a public testimonial fund for Morton.

The money was granted, breaking a precedent. "No ordinary circumstance would justify the trustees . . . but the relations of the hospital and the discoverer are peculiar . . . Doctor Morton is known to have been chiefly instrumental in conferring a great good upon his race. He has received no compensation for his labors. Instead he has borne many sacrifices.

"While by justice," the trustees of the hospital stated, "he is entitled to remuneration from the government, this grant has not come . . . and can only be furnished by voluntary contribution."

There was a tremendous response to this appeal heralded

forth by the Massachusetts General Hospital. Meetings were likewise called in New York, in Philadelphia, in other cities.

Jackson tried to stop the testimonial. He became active again, writing letters to the newspapers, and visiting prominent physicians. But the roll of contributions lengthened. A committee received the funds. Morton's debts were paid off. He could live in peace at Etherton!

The following year a baby was born at Etherton Cottage, a little boy. He was named Nathaniel Bowditch Morton, after the hospital trustee who had first taken action to vindicate Morton's claims.

"And now peace, peace at last," said Morton to his wife.

The controversy was forgotten. The medals were hidden in a drawer. He devoted himself to farming, to raising prize cattle, to winning prizes at the local agricultural expositions.

The office in Boston had been closed a long time ago, the instruments and belongings sold. The Letheon Institute had been discontinued. Tired at last of petitions to Congress and memorials and hearings, Morton had given up the hope altogether of any reward from the government.

He seldom went to Boston. The very bricks of the city seemed stamped with pain for him. Here Jackson lived and brooded, here he had spread his net of hate. The struggle, so long and so bitter, what had been the meaning of it!

Peace! He wanted only peace.

The days passed quietly. His father was dead now. His mother, coming up the path from her cottage, watched her son building a new dovecot, mixing grain in a new mixture for the chickens. She sighed.

What was fame to her? She had never understood it. She had never understood the longing and restlessness of her husband, the furor and excitement of her son's life.

She stirred her hands under her apron. The life of the farm: this was what she had longed for and come back to.

She put her hand on her son's arm. "Is it not better so?" Her voice was almost plaintive. "Just think," she said, "how the farm, before, was neglected!"

He did not answer, but got up and went down to the fishpond. He looked into the pool. It was clear. There were no goldfish swimming there. And the dog, Nig, the black spaniel, all motion, which his father had given him, was not by the pond.

Somewhere near the edges of the brook the dog had been buried. The children had put up a stone, but someone had kicked it away. The spot was forgotten.

He remembered his excitement as he held the struggling dog between his knees, forcing his head into the jar of ether. And then the dog lay asleep, it seemed dying, at his feet.

"What are you thinking about, William? Why don't you answer me?" His mother had followed him.

"Thinking?" he said. He brushed his hand over his forehead. "Of nothing." He went into the house. The whole

family, with a sense of pain, avoided the word ether. No mention was made of it in the house.

On Morton's table lay three blue ribbons, prizes from the Norfolk County Agricultural Society, for prize chickens, a prize rooster, a prize bull. The medals for his discovery of ether lay at the bottom of a drawer which was always kept locked.

Peace at last in a kind of oblivion. He had nothing more to give to the world and the world had forgotten him!

Sometimes, for days, no newspapers were brought to Etherton. Sometimes he read of the men who had fought for him. Stephen A. Douglas, the "little giant" who had spoken with such eloquence from the floor of the Senate in behalf of the discoverer of ether, was running for President.

The campaign of 1859 was hot and fiercely contested. By half a million votes only, the "little giant" lost—his final defeat.

"A friend is gone!" said Mrs. Morton.

An unknown backwoodsman, tall and ungainly, was elected, Abraham Lincoln, who had said, "Slavery is a thing which has, and continually exercises, the power of making me miserable."

The South took this as a sign of attack on their institutions. South Carolina seceded from the Union; Fort Sumter was fired upon. The crisis, so long delayed, had begun.

At the Norfolk County Fair, that autumn, a series of prizes had been given to William Thomas Green Morton,

a farmer, "for the most valuable and economical improvements in the cultivation and management of the farm entire, for the finest cattle, for the best pair of farm horses, for the best dairy, for dairy products, for Mr. Morton's geese, turkeys, fowl."

Life was pleasant. It was good simply to wake in the morning, to work, and at night to sleep unharassed by struggles.

Let fame keep its prizes. He could fight no more!

And even the war, for a time, seemed vague and distant! The first battle of Bull Run, the second, the Peninsular Campaign, Antietam. For a year and a half the armies of the North and South swayed across Virginia. Washington was threatened. Washington was saved. Lincoln changed generals, found Grant and gave him an army of one hundred thousand men—the Army of the Potomac.

To Etherton one day came a telegram. Thousands of men were being wounded in battle, were being operated upon in dressing stations and field hospitals. There were not physicians enough to give ether. Would Doctor Morton come to the Capitol, to be sent with the Army of the Potomac as it moved to attack?

He took the train for Washington, remained posted with the medical division of the army for three years, moving into areas of battle when he was needed.

He was present with General Burnside at Fredericksburg and with Grant in the Battle of the Wilderness. There came the terrible struggle for Spottsylvania Court House. The Army of the Potomac, beaten in three dread-

ful days of blind fighting in the Wilderness of northern Virginia, had pressed forward decisively to attack again.

Piles of wounded, bloodstained, unrecognizable, lay everywhere. Soldiers too seriously hurt to be moved to the base at Fredericksburg, had to be operated upon in the field.

A man in civilian clothes, wrinkled, dust stained, moved among the wounded. They lay in rows, on the ground, on cots, on planks, outside the battered tent of the field hospital, hastily set up.

Clothes were stiff with blood, faces yellow with suffering. To each man's collar a slip of paper was pinned, telling the nature of the operation needed to save his life. Some were unconscious. Some moaned.

An orderly passed. "Here, Doctor Morton, here!" He passed from one row to another with a towel saturated with ether. The towel, folded like a cone, comes down. One man after another breathes eagerly, and feels the oblivion of sleep.

The operating surgeon follows and amputates legs and arms. A second surgeon ties up the arteries, a third dresses the wounds. The men are removed to tents near by.

At an unknown camp in the Wilderness, as General Grant is attacking, he is approached by an aide. "I have here a gentleman who desires the use of a wagon and horses at once!"

"I can give no wagons!"

At the back, a man in brownish clothes, pale, very worn, stands waiting. A medical officer, Dr. John H. Brinton of



He passed from one row to another.

Philadelphia, looks back and recognizes the stranger.

He hurries to Grant. "Sir," he says, "if you knew who that man is, I think you would give him what he asks for."

"No," replies the general. "I will not divert an ambulance today for anyone!" He chews on the black cigar never absent from his mouth. The chin under the reddish beard is stubborn.

The medical officer persists. "I am sure you will give him the wagon, he has done so much for mankind, so much for the soldier—more than any soldier or civilian has ever done before; and you will say so when you know his name!"

The general frowns, takes the cigar from his mouth and looks curiously at the applicant who has come up, a pale man with dark side whiskers, a rather sad and worn look.

"This is Dr. William Thomas Green Morton, the discoverer of ether!" says Brinton.

"Morton!" exclaims Grant. "Morton himself!"

The ambulance is granted. A tent, mess, servant, and private wagon are put at Morton's disposal. The order is signed by General Grant!

Following at the edge of battle, Morton gave ether to more than two thousand wounded men. "I am repaid," he wrote, "for the anxiety and often wretchedness which I have experienced since I first discovered and introduced the use of ether, by the consciousness that I have been the instrument of averting pain."

When the war was over he returned home.

One year passed, another . . . 1866! And then one day in October, coming in early from the pasture, where the cattle were kept, he looked at a calendar hanging on the wall. The date stirred a memory. October 16! Twenty years since the discovery of ether!

He stood in the back hallway, with his hand on the calendar. "William!" His wife came from the front of the house, calling him.

She came out in the doorway. In a gray crinolined gown, she was still slender, still young. How women can endure suffering!

She looked at him. "When James graduates next year from the medical school, don't you believe that some of your old friends could help him to get started in practice?" She held a letter from the oldest boy, William James, in her hand.

He started. How the years had passed! His boy, the baby, William James, born in the year he was at work on the discovery, was a young man now, attending the school in which his father had started, a student at Harvard Medical College.

He was studying under Dr. Henry J. Bigelow, under Dr. Oliver Wendell Holmes, under the men who had known and who had lived through the excitements of the discovery with him.

Twenty years since the discovery! This was the day. No one remembered the anniversary. Ether? Who discovered ether? It was an old question, forgotten.

Two more years passed, 1868. "I'm forty-eight years old," said Doctor Morton to his wife. He had grown stouter. In his cheeks there was a high, unnatural flush. He suffered sometimes from sudden attacks of dizziness. There was a pounding in his head, at the back of the neck, as though the blood beating there could not go through.

"You should avoid every excitement," said Doctor Homans, coming out one day from Boston to see him.

"Excitement?" he answered. "My life is very quiet now!"

He felt old. Something was burned out. Always gentle, endless in his patience before, he could not now endure the smallest irritation. And tensely he had a feeling of something about to happen.

"It's the worries about the farm," said his wife.

The farm was not profitable. Prize cattle and fowl, and immaculate orchards, do not bring money. He had never been primarily a businessman. There were mortgages, payments always falling due, painting to be done and neglected. The expenses of his son's medical education had taken whatever was left from the testimonial fund.

He felt ill and tired. The bitterness was locked up tight in his heart. None of the pain must escape. The medals and papers had been thrust into a drawer. It was never opened.

But could a man forget, wipe away everything that had happened to him? Could he through resolution avoid all the memories? To look back! It was like looking into a pit, dark and terrible. He did not want to be reminded.

And then one day the blow came, the reminder, the awakening of the struggle, all over again.

One morning his wife came into the little room, at the corner of the cottage, which he used as a study, and found him with his face in his hands, half lying over the desk.

"William?" she cried, and came near him. "William, what has happened? What's the matter?"

He was breathing heavily, almost gasping, as though he had been struck, and his face was purple. He sat up, struggled with his stock. She loosened it for him. And then she looked down. On the desk was a magazine. Someone had sent it, had marked a certain article. She leaned over to read. "The Discovery of Etherization." Some journalist looking for an item of interest had raked up an old topic, had gone to call on the chemist, Dr. Charles Thomas Jackson, and had written what the chemist had told him.

"The discovery was made by Charles T. Jackson, M.D., of Boston."

"What?" She was stunned.

"Look," said her husband. Unwillingly, bending over his shoulder, she read on.

"When the first capital operation was performed, in which Doctor Jackson was requested both orally and by letter to administer the ether vapor, he was obliged, in fulfillment of a previous professional engagement, to be absent. He, however, stated to Doctor Warren that he had fully instructed Doctor Morton how to administer it!"

"God forgive him," breathed Elizabeth Morton. "How can he tell such lies!"

Her husband had risen, almost swaying, and with feverish excitement pulled open the drawers of his desk. He was taking out the medals. He was stuffing old papers in his pockets.

"William," cried his wife, "what are you doing?"

"Now and for the last time," he said, "I am going to New York. I will defend myself. I will prove," and he repeated the words again, "for the last time I will prove who is the discoverer!"

He packed hurriedly, dragging out a dusty portmanteau from the closet, listening to her in a daze as she pleaded with him, "Let it pass!"

"Let it pass!" he cried almost choking. "All my life I have let it pass. All my life . . ."

It was a very hot day in July. A heat wave had been sweeping the country. "The steam cars will be intolerable," she said. "You haven't the strength for such a trip."

He shook his head. "Let me go!" He would go to the editor of the magazine in New York, he would face him, he would show him his evidence. The hateful article would have to be retracted. The lies had been told for the last time, for the last time . . . !

In the train it was choking hot. The smell of coal smoke, lying low in the breathless hot air, filled his lungs, made his head ache. His hands trembled. A terrible weariness sagged through his body. And the throbbing in his head struck him each time with a wave of sickness.

"God, let me live. Let me get there!" he breathed. All the rage, all the agony, held back for so many years, was

freed in him at last. He felt consumed, spent, and yet strengthened by an anger so stubborn that it defied the pain, defied the sickness.

Sometimes his head fell sideways, and, sunken against the dusty, smoke-filled pillows, he dozed. Jackson . . . Jackson . . . Jackson . . . said the wheels, and he awoke, put his hands to his head, and felt he could not endure the sound.

Jackson . . . always Jackson!

When he got to New York at last, the hot sickening blast of the city struck him. He sank against a wall. He could not go on. Someone helped him. He went to the telegraph booth.

"Come, I am not well." He sent the message to his wife.

He went to a hotel, took a room, threw himself down on the bed. He must get up. He must write the answer to the attack. He must tell the editor, show him the medals, prove with credentials . . . a wave of blackness swept over him.

When he awoke it was morning. He was lying on the bed in his clothes. The room was stifling hot and airless. For a moment there was no sensation in his body. He had taken ether. He was lying in the dentist's chair in his office on Tremont Row. The door was locked. He was alone. And lying numb, his body helpless, weighted as if with stone, he felt he was dying!

Two days later his wife came. He was asleep. She spoke to him. He struggled. No sound came from his throat.

"Elizabeth!" He choked out the word. How thick, how helpless his tongue felt, and from the sudden effort of sitting up, the room turned, settled, and opening his eyes with effort after the black wave of dizziness, he faced her.

"I . . ." he said. "It was hot . . ."

She loosened his stock, hung up his jacket, shaking out the wrinkles, passed a cloth with cold water over his face.

"I begged you not to go," she said. She looked pale and tired in her hot, black traveling dress. "It's a hundred and two in the shade today!"

She did not tell him that the health commissioner had issued warnings in the papers. On the day previous there had been twenty-eight deaths from the heat in New York.

"We will stay here quietly," she said. "You will rest, and then you will feel better." He lay back on the hard hotel bed and slept.

Waking once, he sensed her beside him. She was fanning him with a folded newspaper. "I wish I were home," he said. A feeling of intense longing passed over him. Why had he come? What for? The medals were forgotten in his pocket. Yet sometimes, the phrases of the article he was going to write kept wheeling in his head, disjointed repetitious sentences, he could never finish them.

"I, William Thomas Green Morton . . . the sole discoverer . . . the Prix de Montyon . . . the Order of Vasa . . . Dr. John Collins Warren . . ."

He murmured restlessly in his sleep and woke up. It was late afternoon. "Help me, Elizabeth, I can't breathe!"

The next day the heat continued, slow steaming, damp and oppressive. The city lay lax under its stroke.

Late in the afternoon he became restless. He begged his wife to get a carriage. "We will drive, anywhere, anywhere, out of this heat." It was decided they should drive through Central Park, on through Harlem and to a country hotel in Washington Heights to spend the night.

The twilight had come down gray and heavy like smoke. The heat had not lifted. A blanket of steam seemed to lie over the city. It was hard to breathe. The perspiration, irritating, bit into the skin.

They summoned a carriage. Everyone, it seemed, was driving out of the city that night. A proper vehicle was not to be had. All they could get was a small chaise for two.

"I will drive myself," said Doctor Morton desperately. Somehow he got into the seat.

"Are you well enough?" His wife was worried.

He gave her a look of intense irritation.

"Let us start. I can't wait . . ."

He took the reins, turned the carriage down Broadway thick with vehicles. At Fifty-ninth Street they entered the park.

"Oh, this is better!" Mrs. Morton spoke. The movement of the carriage seemed to stir a breath of air. He didn't answer. She sat tensely beside him. Sometimes it seemed to her that he nodded, and let the reins lie slack in his hands.

"William," she said, "let me drive!"

He shook his head, took the reins, nodded again. They

were at a Hundred-and-tenth Street, at the wide turn of the road leading out of the park and into Harlem.

But he didn't turn. For an instant he wavered in his seat, slightly swaying, his eyes closed.

The other carriages wheeled around them. He stopped. His wife helped him down. He was struggling with his collar, gasping, his eyes bewildered and frightened.

Elizabeth caught him as he fell to the ground. A crowd gathered at once. "Who is it? What has happened? Is he drunk?"

A policeman came. "Get back! Give him air!" A druggist in the crowd pushed his way forward. "Let me help!" A double carriage was sent for. An hour passed before it came. The sick man lay on the grass, his eyes closed.

The crowd increased, a circle of eyes staring! It was eleven o'clock before the double carriage from the city arrived. Two policemen in helmets, authoritative, impersonal, lifted the sick man to the wide back seat. St. Luke's Hospital, they said, was the refuge that was nearest. They drove the carriage very fast.

His wife followed the stretcher when he was carried into the hospital. It was not apparent now whether the sick man breathed or not. He was put on a bed. The chief surgeon came in, followed by the house physicians. Some student doctors stood in the doorway.

Under the light of a lamp held by a nurse, the surgeon looked at the sick man. His face was sunken now, all the muscle structure fallen, the eyes vacant, but the clean, fine features stood out, the beautiful forehead was calm.



"This is the man who has done more for humanity than anyone who has ever lived."

The profile was unmistakable.

"This is Doctor Morton!" he cried.

Elizabeth Morton, at the side of the bed, lifted her head. No need to tell her that her husband was dying. "Yes," she said.

There was a moment of silence. The surgeon turned to the house pupils. "This is the man," he said, "who has done more for humanity and the relief of suffering than any man who has ever lived!"

Elizabeth Morton struggled up from the bed. She had not wept before. She put her hand in her bag and drew out the medals which she had taken from the pocket of her husband, as he lay unconscious on the grass.

She threw them down on the bed. "Yes, and here is all the recompense he has ever received for it!"

But the dying man on the bed, lying with eyes half closed, as if already sunken in a dream, seemed to smile. Medals . . . fame . . . struggles . . . what for? He knew peace.

The curtain of oblivion swept down.

He was buried in Mt. Auburn Cemetery in Cambridge. At his death, he owned twenty-five dollars in cash, a horse and carriage, a few farm implements. The farm and the cottage, heavily mortgaged, were not his own. He left nothing to his family. But to the world he gave sleep, blessed sleep and deliverance from pain.

On the handsome shaft of red stone erected over his grave by public subscription of the people of Boston, was

engraved a message. It was composed by the aged Dr. Jacob Bigelow, famous scientist and surgeon, professor emeritus of Harvard.

He had written the epitaph. "Here lies William Thomas Green Morton, Inventor and Revealer of Anesthetic Inhalation. By whom pain in surgery was averted and annulled. Before whom in all time surgery was agony. Since whom science has control of pain."

Charles Thomas Jackson, the chemist, heard of the epitaph and twisted his lips with bitterness. For him the struggle was not over. He talked often to himself, mumbled, repeated his claims. A dozen years later he died in McClean Asylum, the insane asylum of the Massachusetts General Hospital, the institution which had steadfastly stood by Morton.

At the Massachusetts General Hospital, the operating room with the Egyptian mummies, the skeleton in the case, the instruments which Dr. John Collins Warren had used, was turned into a museum. Entitled "the Ether Dome," it was opened in perpetuity, to the memory of Dr. William Thomas Green Morton. Every year at that hospital, with proper ceremonies in that room, on the anniversary date, October 16, "ether day" is celebrated.

But the struggle of the claimants, so bitter in life, continued afterward. When the roll of honor was being inscribed on the walls of the Massachusetts State House, and Morton's name was selected, the old controversy awoke. When, on the outside of the great Public Library of Boston, a memorial tablet was carved, inscribed with the

names of writers, artists and scientists who had given great gifts to the world, there were still some who objected bitterly because Morton's name had been placed there!

And in 1920, when the Hall of Fame, of New York University, voted this greatest of American honors to the name of William Thomas Green Morton, there were still some who objected, who brought up old claims.

But from Rochester, Minnesota, the Mayos, great surgeons of a new epoch, wrote, "We believe that Dr. William Thomas Green Morton should be placed on the final ballot for election to the Hall of Fame!"

Still the echoes of the controversy do not die.

Only those who, drawing down the cone of oblivion, feel the sleep he gave, say, without knowing the name of their benefactor, "blessed be the discoverer!"

BIBLIOGRAPHY

- A Brief History of Medicine in Massachusetts*, Henry R. Viet, Boston and New York, 1930
- A Consideration of the Introduction of Surgical Anaesthesia*, W. H. Welch, Boston, 1909
- A History of the Discovery of Modern Anaesthesia*, Dr. Henry J. Bigelow, in *Century of American Medicine*, Philadelphia, 1876
- A Narrative of Events Connected with the Introduction of Sulphuric Ether into Surgical Use*, R. M. Hodges, Boston, 1891
- An Examination of the Question of Anaesthesia*, Truman Smith, New York, 1858
- Biography of Dr. Jonathan Mason Warren*, in the *New England Genealogical Society*, Vol. III
- Defence of Dr. Charles Thomas Jackson's Claims to the Discovery of Etherization*, Joseph L. and Henry C. Lord, Boston, 1848
- Data on the First Public Operation Under Anaesthesia*, John Haesler (Compiled for the University Film Service, Harvard), for the film *The Advent of Anaesthesia*, at the Massachusetts General Hospital, Boston)
- Digest of Evidence*, a thesis by G. Philip Bauer, Harvard, 1933
- The Discoverer of Anaesthesia*, Henry Irving Wood, *Journal of Dental Research*, Vol. 18, No. 3, June 1939
- The Discovery of Anaesthesia*, Elizabeth Morton, *McClure's Magazine*, Vol. VII, pp. 311-318, New York, 1896
- Discovery by Dr. Wells of Applicability of Nitrous Oxide Gas*, Joseph Waters, Hartford, 1850
- Discovery by the Late Dr. Horace Wells of the Applicability of Nitrous Oxide Gas, Sulphuric Ether and Other Vapors in Surgical Vapors*, Isaac Toucey, Hartford, 1850
- Dr. Wells, the Discoverer of Anaesthesia*, pamphlet, New York, 1860

- Ether and Chloroform, A Compendium of Their History*, Dr. Henry J. Bigelow, Boston, 1848
- Files of the *Hartford Courant*, and *Boston Transcript*
- The First Printed Documents Relating to Modern Surgical Anaesthesia*, Dr. William Osler, in *Annals of Medical History*, Vol. 1, New York, Dec. 1917
- Historical Material for the Biography of William Thomas Green Morton*, Benjamin Perley Poore, Washington, 1856
- Historical Memorandum Relative to the Discovery of Etherization*, Boston, 1871
- History of the Massachusetts General Hospital*, Nathaniel G. Bowditch, Boston, 1872
- Horace Wells, Walter H. Jacobs, reprinted from *Dental Cosmos*, Sept. 1935
- Horace Wells Centenary Number, *Annals of Dentistry*, Vol. III, No. 3, Dec. 1944
- Horace Wells "Re-Discovered," Dr. Max Soifer, *Journal of Dental Items of Interest*, Nov. 1941, Vol. 63, No. 2
- Hospital Records of the Massachusetts General Hospital*, Boston, 1846, 1847
- Life of Dr. John Collins Warren*, Edward Warren, Boston, 1859
- Morton Testimonial Association Representation to Congress*, Washington, 1864
- Notes on the History of Anaesthesia*, James McManus, Hartford, 1896
- Obituaries in the *New York Evening Post*, July 16, 1868, and the *Boston Transcript*, July 17, 1868
- "Original Morton Inhaler" for Etherization, George Byron Roth, reprinted from *Annals of Medical History*, Vol. IV (new series)
- Proceedings in Behalf of the Morton Testimonial*, Boston, 1861
- Some Account of the Letheon or Who Was the Discoverer*, Edward Warren, Boston, 1847
- Statement of the Claims of Charles Thomas Jackson*, Martin Gay, Boston, 1847
- Statements of William Thomas Green Morton Submitted to a Committee of the Senate—32nd Congress, 2nd Session, Jan. 21, 1853*. Washington, 1853
- Testimonial of the Members of the Medical Profession in Phila-*

- delphia, New York and Boston in Behalf of William Thomas Green Morton*, Philadelphia, 1860
- Trials of a Public Benefactor*, N. P. Rice, Boston, 1859
- The First Use of Ether as an Anaesthetic in the Battle of the Wilderness in the Civil War*, by William Thomas Green Morton, *Journal of the American Medical Association*, Vol. 42, April 23, 1904
- Vital Records, Charlton, Massachusetts; Dedham, Massachusetts
- Volume of *Morton's Letters and Manuscripts* deposited by Mrs. William Thomas Green Morton, Nov. 13, 1869, at the Massachusetts Historical Society, Boston
- Warren Papers*, Massachusetts Historical Society, Boston
- William Thomas Green Morton Discoverer and Revealer of Anaesthesia*, Dr. S. Adolphus Knopf, *Boston Medical and Surgical Journal*, Sept. 9, 1920
- Worcester County Narrative History*, Vol. 1

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